

# The United States MAGAZINE

Volume II.—No. 1.

MILWAUKEE, MAY, 1881.

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## The Electric Purifier.

For nearly a year since the first mention of the possibility of purifying middlings by electricity millers have been anxiously awaiting further developments, and since it was announced to the world through the columns of milling papers of April 1st, that the electric purifier was a positive success, and had been working with great satisfaction, the subject has become one of universal interest to the trade. We are pleased to be able to present to our readers herewith a description with illustrations of this unique and valuable in-

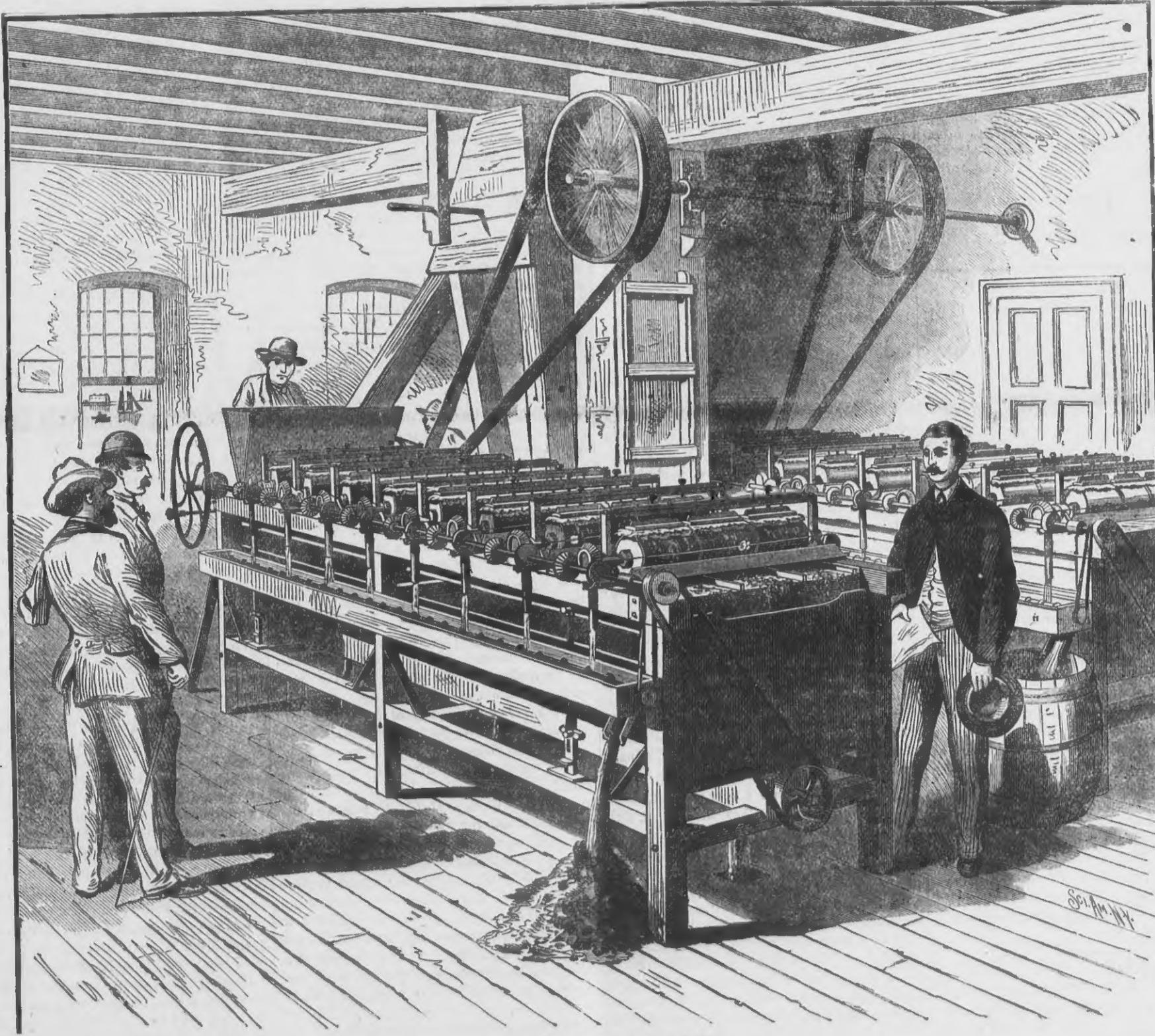
against a sheepskin cushion, the friction from which generates the electricity in the rolls which is employed to remove from the top of the passing material over the agitated sieve, the bran and light impurities. This sheepskin cushion, as is seen in the cut, is under an adjustable pressure which regulates the amount of electricity to be generated. The rubber rolls are driven by small bevel gears from one light shaft. The bran and other impurities taken up by the rolls are brushed off by the sheepskin cushions as the rolls revolve against them, dropping it into tin troughs in

er five feet of number 8 cloth, which carries through it all the *very fine* middlings and the flour dust. The balance of the sieve is clad with cloth varying in numbers from 6 to 0 according to the middlings to be purified—the tail for the first operation being as coarse as 0. On each subsequent operation a finer cloth at the tail should be used, and for the last as fine as number 2. The purified middlings from the whole sieve are either run together or separated by sections as best suits the miller's purpose.

The standard size of the electric purifier is

named, and believe that with greater experience and skill there will be a corresponding increase in its capacity. There being no upward current of air through the sieves, their discharge is perfectly free, and the cloth has no tendency to clog and thus impede their action. The electric purifier also separates with almost equal rapidity soft, light material, tailings from four and fifth reductions, and dust house collections, which from the very nature of things is simply impossible with an air blast or suction machine.

The continuity of action of the rubber rolls



THE ELECTRIC MIDDLEDINGS PURIFIER.

vention which seems certain to become extensively introduced during the coming summer.

The large cut presents clearly the novel features of the construction and operation of the machine.

It consists of a properly constructed frame with a sieve resting upon the top, and a conveyor underneath to remove the purified middlings, with slides to cut off and separate the same at the will of the miller.

Above the cloth sieve at a distance of one to two inches are placed hard vulcanized rubber rolls or cylinders, six inches in diameter, one-fourth of an inch thick, and nine inches long. Usually three of these rolls are revolved upon a single shaft as seen in the cut, and these series of three are placed fourteen inches apart. These rolls revolve at a speed of thirty revolutions per minute, under and

proper position, for each series of rolls, and are then carried by endless straps with sweeps attached to the side of the machine, where they are collected automatically and discharged through one spout.

The operation is as follows: The middlings pass through the feed roll to the head of the sieve, which is clad with cloth of different degrees of fineness. The motion of the sieve causes the bran and fibre to rise to the top, and the pure middlings from their specific gravity to work to the bottom and pass through the sieve cloth. At about two feet from the head of the sieve the work of the electrified rolls commences in removing the impurities and is continued from one series of rolls to another to the end of the machine. The sieve with a motion of about four hundred per minute, is usually clad at the head with four

as follows: Frame ten feet long, four feet high, three feet wide. The sieve has a cloth surface of nine and a half feet in length and twenty-seven inches in width, divided into three equal sections of nine inches each, corresponding with the length of the rubber rolls revolving directly over it. There are used in this size, eight series of three rolls each, making twenty-four in all. The machine takes up very little space and can be placed in any position in a mill, where the middlings can be spouted to and from them.

The standard size, with a sieve-cloth surface of twenty-one square feet, operates upon middlings at the rate of four hundred to six hundred pounds per hour, according to the character of middlings and the flour to be made. The owners say they have successfully operated the machine on the highest quantities

in performing their part of the work of purification under every possible condition of atmosphere, has been thoroughly proved by practical use during the past year, the theory of which, as fully accepted by prominent electricians and explained in as follows:

Under any condition of the atmosphere electricity and attraction can be produced by properly exciting the surface of hard rubber, or of other similar non-conductive material; but, upon the condition of the atmosphere depends very largely its continuance and the distance it can be transmitted. The manner of employing the force of frictional electricity in an electric purifier, is such, that a constantly excited surface upon the rubber rolls is maintained and almost instantly, after leaving the friction cushion, the work of purification by

*Continued on the fifth page.*

# THE UNITED STATES MILLER.

## UNITED STATES MILLER.

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### ANNOUNCEMENT:

**MR. P. SCHNITTLER**, Berlin, N. Mueller St., 179 B, Germany, is duly authorized to receive subscriptions and advertisements for THE UNITED STATES MILLER, from all parts of Continental Europe, and to receive payment for the same.

**W. DUNHAM**, Editor of "The Miller," 69 Mark Lane, and **HENRY F. GILLIG & CO.**, 449 Strand, London, England, are authorized to receive subscriptions for the UNITED STATES MILLER.

MILWAUKEE, MAY, 1881.

We send out monthly a large number of sample copies of THE UNITED STATES MILLER to millers who are not subscribers. We wish them to consider the receipt of a sample copy as a cordial invitation to them to become regular subscribers. Send us One Dollar in money or stamps, and we will send THE MILLER to you for one year.

### MILLERS' DIRECTORY.

All mill-furnishers, flour brokers or other parties desiring to reach the flour mill owners and millwrights of the United States and Canada, should have a copy of the above named work. It contains about 15,000 names with Post-office addresses, and in many cases (notably in Wisconsin and Minnesota) gives the number of runs of stone, sets of rollers, and kind of power used, or the capacity in barrels. A limited number of copies only have been printed. Upwards of 100 of the leading mill-furnishing houses and flour brokers in this country and several in Europe have already secured copies. Send in your orders at once. Price Five Dollars, on receipt of which Directory will be forwarded post-paid by mail. Address,

UNITED STATES MILLER,  
MILWAUKEE, WIS.

The United States Consuls in various parts of the world who receive this paper, will please oblige the publishers and manufacturers advertising therein, by placing it in their offices where it can be seen by those parties seeking such information as it may contain. We shall be highly gratified to receive communications for publication from Consuls or Consular Agents everywhere, and we believe that such letters will be read with interest, and will be highly appreciated.

### Millers' National Association.

#### EIGHTH ANNUAL CONVENTION.

ST. LOUIS, Mo., April 22, 1881.

The Eighth Annual Convention of the Millers' National Association will be held at the Grand Pacific Hotel, Chicago, on Tuesday, June 7th, 1881. This will be a *Delegate Convention*, and the Presidents of the several State associations are requested to appoint five representatives to attend the meeting. All of our members in unorganized States are invited to take part, as also such members from organized States as happen to be in Chicago on that day.

Millers who are not members of the National Association, or those who are behind in the payment of their dues are not expected to attend.

No change is made in the members composing the different committees last year.

GEORGE BAIN, President.

S. H. SEAMANS, Sec'y.

A BOOK FOR MILLERS.—We will send a copy of Practical Hints on Mill Building, by R. J. Abernethy, to any address postpaid, on receipt of \$4.00. This is the latest work on milling and is worth the price to any miller.

From the 1st of September 1880 to April 1st 1881 there were 228,000 barrels of flour shipped from America to Continental ports of Europe. During the same period in 1879-80 but 40,000 barrels were shipped to Continental ports.

We respectfully request our readers when they write to persons or firms advertising in this paper, to mention that their advertisement was seen in the UNITED STATES MILLER. You will thereby oblige not only this paper, but the advertisers.

MR. RICHARDSON, of Mississippi, is said to be the largest cotton-planter in the world. He has many plantations, factories and mills, and also a great many country stores. He is

a man of sixty-two. The ex-Khedive of Egypt, it is said, had a larger cotton crop than Richardson, but he has since then gathered the largest crop of cotton ever planted by one man. It reached one year over 12,500 bales. His cotton crop brings nearly a million dollars a year. He is not only the largest planter but is the largest manufacturer in the South.

DURING the month of March there were exported from this country 670,111 barrels of flour against 897,121 barrels during March, 1880. During the nine months ending March 31 our exports of flour were 5,985,544 barrels against 4,431,756 barrels for a similar period ending March, 1880.

### Cawker's Flour Mill Directory for 1882.

We hereby announce that we shall issue a Directory giving the names with post-office addresses, county and state of the flour mill owners of the United States early in the year 1882—about February first. The work will also give, when we can obtain the particulars, the capacity of the mill and the kind of power used. No pains will be spared to make it complete. Orders can be sent to us for the 1882 Flour Mill Directory at any time, and payment made upon the delivery of the book. The price will be as heretofore, Ten Dollars per copy. All intending to order copies will confer a favor on us by notifying us, as only a limited number of copies will be printed.

### Personal.

A. SYME, Esq., Menasha, Wis.

S. KAMMERER, Esq., Fountain City, Wis.

MCNIEL of the Richmond Manufacturing Co., of Lockport, N. Y., has been in the city selling goods.

W. F. PUTNAM, Esq., head-miller for Messrs Hickox & Co., of Cleveland, O., called on us April 28th. He is in the city making arrangements for the building of an entirely new 800 barrel roller mill.

JAMES MORGAN, head-miller at J. B. A. Kern's Eagle Flouring Mills of this city, sailed for Europe April 30. He is accompanied by his wife. They will remain in England, visiting relations, until August.

W. D. GRAY, milling engineer for Messrs Edw. P. Allis & Co., sailed for London April 28th on the steamer City of Brussels. He was accompanied by Mr. Knickerbocker of the Geo. T. Smith Middlings Purifier Co., of Jackson, Mich. These gentlemen will return very soon after the close of the Millers' International Exhibition in London, commencing May 11th. We wish them a pleasant journey and a safe return.

DURING the past month the UNITED STATES MILLER has been favored with calls from the following gentlemen connected with the milling trade: S. H. Seamans, Esq., Milwaukee; James Morgan, Esq., Milwaukee; Wm. Lehmann, Esq., Milwaukee; Charles H. Booth, Red Wing, Minn.; John Hill, Esq., Milwaukee; Henry Smith, Milwaukee; W. D. Gray, Milwaukee; L. R. Hurd, Milwaukee; S. Danah, Stone Bank, Wis.; Capt. E. W. Pride, Neenah, Wis.; Jessie B. Dorman, Esq., editor of *The Millstone*, Cincinnati, Ohio; Albert Hopkin, editor of *The Northwestern Miller*, Minneapolis, Minn.

WE recently received a very pleasant letter from our old friends, Chas. B. Slater & Co., mill builders and furnishers, at Blanchester, Ohio. They inform us that they have been very busy for a long time, and are now building an extensive addition to their works, and with improved facilities will be able to turn out work more rapidly than ever. They mention that they have closed a contract to remodel G. Welker & Co.'s mill at Petersburg, Ohio, adding rollers, mill-stones and other machinery, so as to make it one of the best mills in Northeastern Ohio. We are glad to hear that the Slater bolt reels are in steady demand.

ARTEMUS WARD'S TRIP TO BOSTON.—While a great observer of men, and one of the keenest readers of character, Brown took comparatively little notice of places and other objects of interest. A lady who knew him well said that had a beggar in rags been seated by the most beautiful statue, he would have seen the beggar first. This neglect of places several times brought him to grief. Once, when going from Waterford to Boston, he went on board a steamer at Portland, late in the evening and at once retired to his state-room. A storm was threatening and the boat did not leave. He arose early in the morning and, going out upon the landing, called a hackman and asked to be conveyed to the Revere House. And not until he had broken the second commandment and had threatened to break the fifth, could he be persuaded that he was yet in Portland.—*Scribner for May.*

[Written for THE UNITED STATES MILLER.]  
The Hungarian Pet Industry—Roller Mills in Europe and America.

I noticed in the *Ungarische Muehlen Zeitung* of March 27th an indignant criticism of our American Consul's report to our Government. Your readers will undoubtedly be greatly amused when they learn the cause of it. The Hungarian millers claim to have been gravely insulted by having their milling business referred to by our representative as the "Austro-Hungarian Pet Industry." The Hungarians mistook the word PET for PETTY and demanded an explanation of our Consul who was astonished to learn that he had given offence, although his intentions were of the best.

Notwithstanding his explanation that a "pet industry" meant a favorite or best nursed industry, they were inclined to believe that the Consul's explanation, like everything else American, not excluding flour, was bogus.

A member of the editorial staff of the *U. M. Zeitung* lived in the United States (we are informed in an official position) for six years. He, of course, learned to speak and understand English, but like many other foreigners who have resided in this country for a much longer period, he has not proved himself competent to judge of the linguistic difficulties of our language. His Hungarian milling friends, however, believed him quickly, and leaving our affable Consul solely vexed, they went off and have endeavored to prove what we all have long believed that as yet the Hungarian milling trade is really an enormous one. This query, however, presents itself to us at the present time: Would the Hungarian millers have paid so much attention to an American Consular report five years ago?

We are sorry that a little linguistic ignorance on the part of our friends should lead to any misunderstanding. Any educated Hungarian would know what is meant by "petite industrie." The English word "petty" is equivalent to the French word "petit," and means small or unimportant.

I have carefully read the German and French periodicals for the past years and have noticed with wonder how diligently they have tried to hide from themselves the growing importance of the American flour trade. The *Ungarische Muehlen Zeitung* has at last, however, felt compelled to notice it and to chronicle the serious inroads on their home trade made by American flour. That paper has shown month after month in 1880 the decrease in the Hungarian flour export trade, and declared that wherever flour was sold the American could be found, even in Switzerland, and that the only part of the world where American competition was not felt at all yet was on our own Continent, in Brazil!

Brazil will soon have a good supply of American flour, as some of our large Southern mills have already begun negotiations with the countries in the Southern part of this Western Hemisphere. We are willing to concede to the Hungarians all honor for their improved processes in the manufacture of flour, and we Americans will strive to make what profit we can out of our facilities.

The rapid introduction of the roller mill system into the flour mills of the United States is truly surprising. It is only three years since a few porcelain roller mills were introduced sporadically, and a little later some of the leading millers ventured to buy and use "creased" rolls for wheat. Just think of the change since then. Three years ago Edw. P. Allis & Co., mill-builders, of Milwaukee, hesitated considerably before they would venture to buy tools to enable them to manufacture roller mills rapidly. They were inclined to believe that the demand for roller mills was only a temporary one. At the present time they have an extra shop 80 x 400 feet, and three stories high, in which nothing but roller mills are built. They have put on the market during the past two years over 2,000 of the noiseless flour-roller mills, and they are now turning out five complete mills every 24 hours.

Other roller mill factories are in active operation in different parts of the country, and I think I am safe in saying that not less than 20 roller mills of the flour roller type, with rolls 9 inches in diameter and 18 inches in length, are now produced daily in the United States. The Hungarian head miller in the employ of E. P. Allis & Co., acting as their travelling agent, says that no matter what portion of the country he may visit, he finds that the millers have fully made up their minds that the roller system is preferable to anything heretofore known for the manufacture of flour. There are to-day mills built on the "New Roller System" in New Mexico as well as in Maryland; in Dakota and California, in Minnesota, Wisconsin and Tennessee and in

most of the older states. Millers encumber themselves financially, fully persuaded that as soon as they have their mills remodelled they can quickly satisfy their creditors and make money for themselves.

Look at the difference on the continent of Europe. France and Germany lie by the side of Hungary, whose "pet industry" is milling by the most improved methods. Although rollers have been used successfully in Hungary for over 20 years, there are many millers in Northern Germany and in the entire of France that have not a roller mill in their mills, and who still believe that rolls were only invented to increase the wealth of mill-furnishers. Foreigners are very conservative, and do not like to expend money unless they feel insured beforehand that it will soon come back with interest.

The American millers have not been slow to learn that they could make more money by the roller process than by any other, and that is what all of us, whether Europeans or Americans, are after. The Almighty Dollar is pleasant for all of us to have, and we even believe that you, Mr. Editor, may smile when it comes in from a reader to renew his subscription, and I believe that you are fully entitled to a handsome reward for the continuous efforts you have made during the past five years to keep the milling public posted on all matters of interest to them. Yours truly,

R. BIRKHOLZ.

Milwaukee, April 27, 1881.

### Bran and Germ.

When wheat has been perfectly cleaned and all extraneous matter removed from the coating and crease, there are two discoloring elements left, and only two—the bran and the germ. The bright white color of flour will be enhanced just in proportion as the separation of these two from the flour is perfect. For a long time millers making fancy brands of flour endeavored to get rid of the germ, on account of the saffron hue it gave the flour. Science, however, has demonstrated that in making this attempt they acted more wisely than they knew; for in removing the germ from the flour they increased the bread-making qualities of the flour by removing an impediment to the "raising" of the dough. Many millers believe that the germ ought to be incorporated in the flour, and rely for their belief on the fallacious argument that flour should contain all that the wheat berry contains. Of course the logical conclusion of such an argument would be that the flour should also contain the bran, which science as well as the human taste, dictates should be rejected. The germ is of an oily nature, and this fact causes it to prevent the gluten from absorbing water to its full capacity. It is therefore an evil in the flour, whose presence is only in a very slight degree compensated for by the fact of its adding its insignificant bulk to that of the flour. Acute millers have long been cognizant of this fact. There are other millers who are not acquainted with the fact, and it is their attention which we wish to direct to it.

What is true of germ is true of bran, only more so, to use a paradox. It not only detracts from the raising qualities of the bread, but specks it far more objectionably than the germ discolors it, besides being indigestible. If ordinary flour be examined with a microscope, hundreds of little dark specks will be discovered, the majority of which are pulverized bran. The fact of their being so small does not in the least lessen their injurious effects on the flour. They discolor it just the same, and fine bran is just as indigestible as coarse bran, as well as interfering just as much with the "raising" of the bread.

Possibly most of our readers know these facts just as well as we do, or perhaps better. But many who are acquainted with them do not seem to grasp the idea that gradual reduction is founded upon them, and exists because of them. It is simply a system for removing impurities from the wheat in a more complete manner than the old systems can do. And that is the chief difference in the flour made by the old and the new process. One is better separated than the other. The impurities can be pulverized just as finely as the flour, and only a small portion of them can be bolted out. Consequently they must be removed before they become reduced to such diminutive size, and gradual reduction merely proposes to do this. We do not flatter ourselves that we are enunciating anything new; but there are many who do not seem to understand the subject in its proper light. When millers do understand what gradual reduction means, they will commence more generally to at least approximate to it.—*American Miller*, Chicago.

*Continued from the third page.*  
each roll to a considerable degree is accomplished.

The electric purifiers have been in operation for several months in F. E. Smith & Co.'s Atlantic Flour Mills in Brooklyn, N. Y., and in a letter dated April 8, 1881, they express the opinion that the saving effected by the electric purifier over wind purifiers is from 10 to 20 cents per barrel, where wheat is worth \$1.20 per bushel. They advise millers who have expensive purifiers on hand to keep them for finishing up the purification of middlings, until they can use the electric entirely, but by all means to use the electric purifier on the middlings first, as that is when the largest amount of waste takes place. The electric purifier does not make a perfect separation of middlings at a single operation, but it does the work of purification by a single operation equal to the best air purifiers and with no waste.

Thomas B. Osborne, of New Haven, still a student in Yale College, the inventor of the Electric Middlings Purifier, comes by his inventive genius naturally. He is the grand-son of Eli Whitney Blake, of New Haven, well known as the inventor of the Blake Stone Crusher, a machine which in all parts of the world has effected a revolution in the reduction of ores and in macadamizing roads. Mr. Blake is the nephew of the celebrated Eli Whitney whose name he bears and who gave to the world that still more renowned invention, the Cotton Gin.

The Smith-Osborne patents for this process of purifying middlings are owned by The Electric Purifier Company, of New Haven, Mr. John Rice, General Manager, New York office, 17 Moore Street, to whom all communications in reference to the electric purifier should be addressed.

## NEWS.

### EVERYBODY READS THIS.

ITEMS GATHERED FROM CORRESPONDENTS, TELEGRAMS AND EXCHANGES.

The recent floods carried away the dam at Whitewater Wis.

25,000 emigrants have sailed from Hamburg, Germany, since January 1.

BURNED.—Muirhead & Grays Oatmeal mill at London Ontario, burned recently.

DIED—At Bellune, Ia., March 20. N. Kilburn, a miller and banker aged 59 years.

This year's Wisconsin State Fair will be held at Fond du Lac, beginning September 26.

Reports of floods in Hungary are frequent and great damage is said to have been done.

BURNED.—Radcliffe's flour mill at Chillicothe, Mo., burned April 17th. Loss \$6,000.

A portion of the upper dam at Notbohm's mills Janesville, Wis., was washed out lately by the flood.

Horner & Smith's mill at Redfield, Iowa, was destroyed by an ice gorge in the Corn river, April 1.

Bartlett and Bailey's flour mill, at Eau Claire, Wia., was burned April 15. Loss about \$20,000.

James Bagley, of Genesee, Wis., has sold his mill to John Hollaway and is himself going to Huxley, Dakota.

An enormous amount of flax seed will be sown by farmers in the vicinity of Crookston Minn., on their new breaking, it being a sure crop and producing well.

The vaults of the United States Treasury now contain about \$173,000,000 in gold coin—inmense and unprecedented.

V. W. Panton's flour mill, at South Elgin, Ill. was burned by an incendiary April 21. Loss \$12,000. Insurance \$6,000.

Dalrymple is to seed 30,000 acres this spring on the two bonanza farms of the Red river which are under his superintendence.

Wm. Lea & Sons of Wilmington, Del., are putting in their mills eighteen thousand conveyor flights, bought of Wm. E. Catlin & Co., Chicago.

Lyon, Clement & Greenleaf, of Wauseon, O., are putting in their mills twenty-seven hundred conveyor flights, bought of Wm. E. Catlin & Co., Chicago.

Harrison's elevator, at Burlington, Iowa, burned April 9. Loss \$16,000. Insured 1,700 bushels of flax seed and 43,000 bushels of other grain were burned.

The Pillsbury A mill at Minneapolis will probably start up July 15. There will be two turbine water-wheels, weighing 40,000 pounds each, set to drive the machinery.

Cooper & Co.'s engine and iron works at Mt. Vernon, Ohio, burned April 9. Loss \$100,000. Insurance \$66,000. It is supposed that the fire was the work of an incendiary.

E. Maskery and Son of Maquoketa, Ia., have purchased a Methodist Church at that place, which they will fit up with machinery and will hereafter devote to the manufacture of corn meal.

Buffalo, N. Y., has twenty-eight elevators, with an aggregate capacity of 8,802,000 bushels. Three have a capacity of 600,000 bushels each, two 650,000 each, and one that will store 1,000,000 bushels.

Messrs. Ganz & Co., of Budapest, Hungary, have exported a large number of roller mills to Russia. Their manufacturing establishments at Budapest and Ratibor have been run to full capacity.

The Council Bluffs Elevator Co. will erect an elevator with the capacity of 1,000,000

Witless says: "This connection between Canada and the United States will be made partially by tunnel and partly by tube. Certain railways are forming a combination for Western traffic, and this project is part of the scheme."

Railway building in Mexico is being pushed with great energy. No less than 7,000 men are now at work on one section of the road from the City of Mexico to Toluca, which it is said will be opened in May next. The Mexican Central Railroad had 10,306 men employed in its construction during the last week in January.

A firm at Dundee, Scotland, announce that they contemplate establishing at Minneapolis in the early future a large manufactory for the purpose of supplying the American market with burlaps and export bags. The firm has ample capital, and is now engaged in the same business in Scotland. This is one of the many

42x74 feet, and a new three-story building 42x125 feet, have been added to the original structure, these additions affording storage capacity as great, if not greater, than that of any similar establishment in St. Louis. The entire concern covers an area of 14x125 feet, and the capacity for output increased from 400 to 1,000 barrels a day.—*St. Louis Paper*.

The following are the names of a few of the millers who have just ordered the "Octagon" buckets of W. E. Catlin & Co., Chicago, Ill.: Davis & Sons, Rochester, N. Y.; Brommel, Miles & Co., West Chester, Pa.; Higbee & Co., Bellevue, O.; Moseley & Motley, Rochester, N. Y.; Owen Clark, Stevens Point, Wis.; Flint & Deihl, Rolla, Mo.; La Force & Smith, Floris, Iowa; J. P. Choih & Son, New Columbia, Ill.; Maxwell & Bro., Millersburg, O.; H. M. Cutchen, Winston, W. Va.; John Stahl, Ridott, Ill.; Smith & McConnell, West Union, W. Va.; J. F. Johnson, Anapolis, Ill.; Fleck, Bledung & Co., Guttenberg, Iowa.

Mr. B. J. Abbott, formerly of Terre Haute, Ind., has purchased the old mill at Newport, Ind., and the well-known milling engineers, Nordyke & Marmon Co., of Indianapolis, Ind., are engaged in overhauling every part and will make almost an entire new mill out of it.

Harrison's elevator at Burlington, Iowa, was entirely destroyed on 7th inst., together with its contents, consisting of 60,000 bushels of grain, 17,000 of which was flaxseed, and the balance principally corn. Loss on building, \$16,000; insured. Loss and insurance on grain not known.

A new 250 barrel mill at Springfield, Ill., composed of a combination of rolls and stones furnished and set up by Nordyke & Marmon Co., has just started up with great success, and are already far behind with their orders. Millers who contemplate remodeling or building should see this mill in operation.

Mr. Alex. H. Smith, of St. Louis, Mo., best known to the milling fraternity as one of the most active members of the Executive Committee of the Millers' National Association, has identified himself with a new enterprise in St. Louis, to be known as the Victoria Mill Co., which is about to build a large roller mill. The ironwork including shafting, pulleys, gearing, etc., has been purchased of Nordyke & Marmon Co., of Indianapolis, Ind.

We clip the following from the Junction City (Kan.) Union: "At last Junction City is to have a custom flouring mill. All the arrangements for its erection, except the site, have been agreed upon. The projectors and proposed proprietors are C. H. Miller, of this city, and his brother R. M. Miller, who lives on the Republican river. The mill will have four run of buhrs, and all the machinery will be new and of most improved style. The motive power will be steam. This mill is a necessity to the business men of Junction City and the farmers within range of our business. When it is completed farmers can get all the milling accommodations in Junction City their wants may require."

A FALSE REPORT.—A statement has been widely published that an 8,000 barrel mill was to be erected in Minneapolis by Jas. J. Hill and others of the St. Paul, Minneapolis & Manitoba R. R. We have made inquiry and in a letter we have just received from Mr. Hill he says: "I have no intention of building any mill this year." Mill furnishers will please give Mr. Hill a little time to draw his breath.

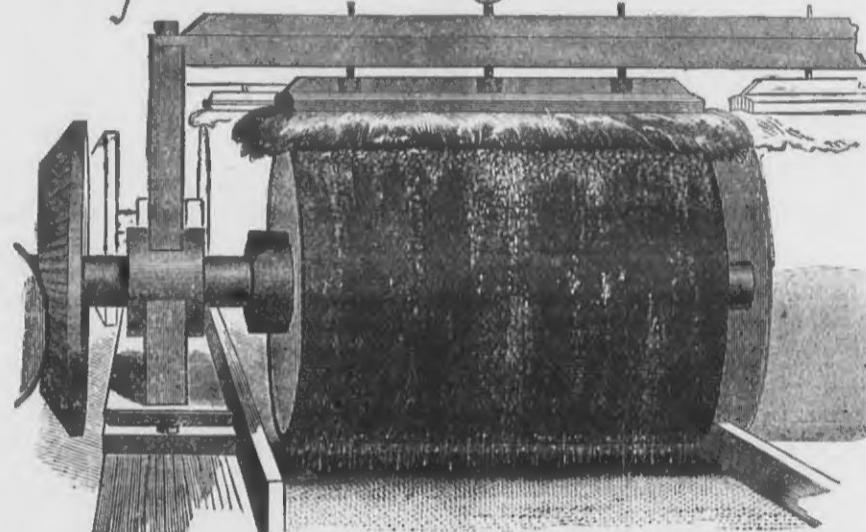
#### Things Worth Knowing.

PRESERVING LEATHER.—To preserve leather hose, belting, etc., in good condition, use crude castor oil, warmed, if possible, and freely applied. It increases the pliability of the leather and the cling of the belts, and does not become rancid. Rats avoid it. In hose it should be pumped in from the interior under considerable pressure, thus thoroughly filling the pores.

THE ACCUMULATION OF SOOT IN CHIMNEYS may be prevented by putting a quantity of salt into the mortar with which the interior courses of brick are to be laid. The philosophy of this method may be thus stated: The salt in that portion of the mortar which is exposed absorbs moisture from the atmosphere every damp day. The soot thus becoming damp falls into the fireplace.

TO MAKE MODELING CLAY.—Knead dry clay with glycerine instead of water, and a mass is obtained which continues moist and plastic for a length of time. This removes one of the greatest inconveniences that is experienced by the modeler.

Fig. 2



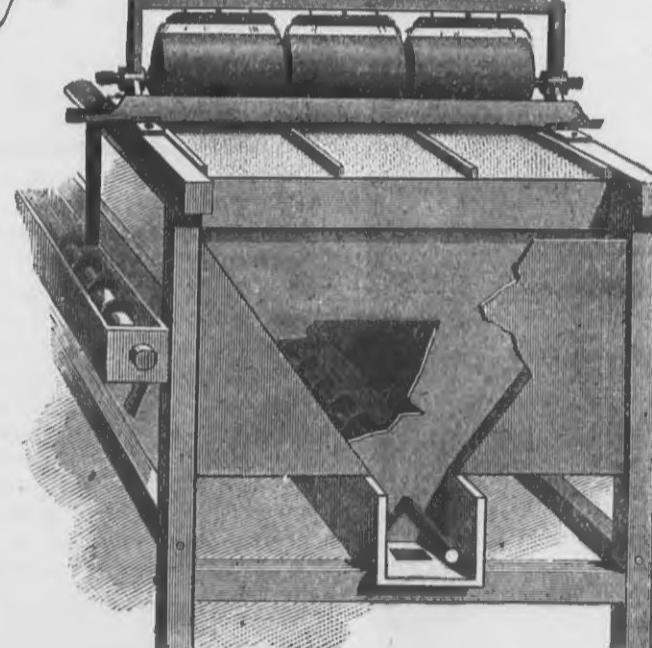
The above cut represents a single hard rubber roll taking up the bran and other impurities as it revolves over the agitated sieve, the bran leaping from the sieve to the electrified roll at a distance of an inch.

bushels, at Council Bluffs, Iowa. It will be completed and ready for business in time for the harvest of 1881.

John Kirchen a sweeper in the Eagle Mills, Milwaukee, recently got caught in the gearing and was horribly mangled. He survived his injuries three hours. He leaves a family of wife and five children.

Mr. S. Kammerer, formerly of Waumunda, Wis., has just purchased Meyers & Co.'s flour mill at Fountain City, Wis., and will at once proceed to refit it with improved machinery, including roller mills.

Fig. 3



The above cut represents the tail of the Purifier broken to expose the shoot for the tailings and the spiral conveyor further in, by which the several grades of middlings are conveyed to their respective delivery spouts.

A company has been organized in Florida to build a ship canal across the State, by way of the Caloosahatchee river and Lake Okeechobee to the ocean, near the mouth of the St. Lucie river. The capital stock is \$30,000,000.

According to Bradstreet's, New York the number of failures in the United States and Canada during the past quarter was 1,986, against 1,394 in 1880 and 2,350 in 1879. The increase from 1880 to 1881 was due to the abnormal state of the weather and to foolish speculations.

Wm. E. Catlin & Co., millfurnishers, Chicago, Ill., write us: "Within the past two weeks we have received orders for mill picks from Alabama, Georgia, Indiana, Kansas and New York. Many of these orders came from the most prominent mill furnishers of the United States."

Speaking of the project to cut a railroad tunnel under the Falls of Niagara, the Montreal

straws that show the strength of the current of flour and grain exports abroad.

The enlargement of the Welland canal, so that vessels carrying 60,000 bushels of grain can pass through, has led Montreal capitalists, backed by moneyed men in England, to contemplate the establishment of a line of propellers and barges between Chicago and Prescott, to connect at the latter port with a line of grain-barges for Montreal and Quebec.

Harmon, Holmes & Co., proprietors of the Lakata flouring-mill at Sauk Centre, have secured a government contract to furnish 2,100

straws that show the strength of the current of flour and grain exports abroad.

The vaults of the United States Treasury now contain about \$173,000,000 in gold coin—inmense and unprecedented.

V. W. Panton's flour mill, at South Elgin, Ill. was burned by an incendiary April 21. Loss \$12,000. Insurance \$6,000.

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# THE UNITED STATES MILLER.

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E. HARRISON CAWKER, EDITOR.

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MILWAUKEE, MAY, 1881.

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Only \$1 per year.

DEALERS in milling supplies of all kinds should advertise in the UNITED STATES MILLER.

We have received from P. Schneidler, Civil Engineer, of Berlin, Germany, several numbers of his *Intelligenz Blatt*, devoted to milling and kindred industries.

PHILIP WIESEND, a miller about 40 years of age, formerly of Rockendorf, Bavaria, will learn something to his advantage by addressing the undersigned. Or any person having information of his present whereabouts will advise us of same. CHAPIN, DEY & FRIEND.

Attorneys, Milwaukee, Wis.

JOHN T. NOYE.—We are pained to announce the death of John T. Noye, of Buffalo, N. Y., April 6, 1881, aged 68. Mr. Noye was one of the oldest mill-furnishers in this country and the house of John T. Noye & Sons, Mill-furnishers is known all over the world. Mr. Noye has been in poor health for some time, and his death was not unexpected. Richard K. Noye, son of the deceased has for some years past managed the business which will go on uninterrupted.

MINNESOTA MILLERS.—The Minnesota millers' Association met at Minneapolis, April 12, and elected the following officers for the ensuing year: President, W. P. Brown, of Red Wing, re-elected; Secretary, Frank Pettit, Minneapolis; Vice President, D. Bronson, Stillwater, and Geo. A. Pillsbury, Minneapolis; Treasurer, W. F. Cahill; Executive Committee, E. V. White and Lorenz Fletcher, Minneapolis, and E. L. Baker, Red Wing; member of National Executive Committee, J. A. Christian, Minneapolis. The reports of the Secretary and Treasurer show a prosperous condition of the Association.

WEDDING BELLS.—On the 19th of April, Albert Hoppin Esq., editor of the *Northwestern Miller* of Minneapolis, Minn., was married to Miss Alice Dole, daughter of the Rev. Dr. Keene, at St. John's Episcopal church in Milwaukee. The church was handsomely decorated for the occasion and a goodly number of the elite of the city were present at the ceremony. After the ceremony a reception was held at the residence of the bride's father until 4 P. M., at which time the newly wedded pair left for a tour via Chicago. We extend our warmest

congratulations to Bro. Hoppin and wish the couple unlimited happiness and prosperity as they journey on through life.

HOPPIN takes exceptions to our reproduction of an article entitled, "The St. Anthony Falls Water Power" without credit. It does so appear in the April number of the UNITED STATES MILLER. The fact is that we intended to give him credit for the article, but somehow the credit was tacked on to the wrong article, entitled "Stones clinging to the under side of ice" which made its first appearance in the *Scientific American*. However, even if we had intentionally appropriated the article it would hardly balance accounts on that score with our neighbor, "up yonder by the big falls." We hope Bro. Hoppin will continue to publish articles worth stealing.

THE FLOODS IN DAKOTA. Upon the breaking up of the ice in the Missouri river and the thawing of the vast quantities of snow which has fallen during the past winter and spring, the water overflowed the banks and covered the bottom lands, in many cases thickly settled, and it has done great damage to property. Whole villages have been destroyed and it is to be feared that many human lives have been lost. The Governor estimates the number of those driven from their homes and despoiled of all their possessions at about 7,000 and appeals to the people generally for assistance at once in the shape of clothing, food and seed or money. The Secretary of War has ordered the distribution of rations to the famishing people until their condition is bettered.

FLOUR VS. WHEAT RECEIPTS.—There is no denying the fact that the time is rapidly approaching when the receipts and shipments of wheat will show a marked decrease and that of flour a corresponding increase. For instance, the receipts of wheat at Chicago since Jan. 1 to April 12 are about 2,000,000 bushels against 3,500,000 bushels for the corresponding time last year. The arrivals of flour, however, have been equal to about 8,000,000 bushels against 8,900,000 bushels last year, so that the aggregate of flour and wheat shows an increase of 2,800,000 bushels. This is as it should be. We have the facilities for manufacturing all our own wheat into as good flour as can be made in the world and our millers should have the profits of manufacturing it into flour. Great progress has been made in the past three years and the present year will be still more encouraging to our millers or we are much mistaken.

THE GRADE OF FLOUR.—A meeting of the proprietors of "new process flouring-mills" throughout the State, for the purpose of forming a State Association of those engaged in that business, was held in this city April 5th. The prime purpose of the Association is to advance the interests of the foreign export trade, especially that to Liverpool, by establishing a high standard of flour, to be certified by the Association, and requiring all members of the Association to make all their flour for export of that grade, thus obviating a great objection of foreign dealers to California flour, arising from the great difference in the quality of the flour exported from this State, and consequent uncertainty regarding it in foreign markets. It felt that by this measure the first-class mills of the State will be enabled to obtain a better and a uniform price for their flour. An organization was effected by the adoption of a constitution and by laws and the election of officers, to hold until the annual meeting, to be held on the second of next month in this city. It is expected that by that time all of the first-class mills in the State will be enrolled in the Association.—*S. F. Grocer and Country Merchant.*

#### The Cincinnati Steam Engine Test.

A communication from Edwin Reynolds, M. E. of Milwaukee, inventor of the Reynolds-Corliss Engine and Sup't for Edw. P. Allis & Co.

To the Board of Commissioners, First Millers' International Exhibition, Cincinnati, O.

GENTLEMEN: I learn from various sources that Mr. Wheelock is pressing his claims to the award offered to the competing engines at the late Millers' International Exhibition, and basing his claims for superiority on the report of the expert.

In behalf of Messrs. E. P. Allis & Co., exhibitors of the "Reynolds" engine, I beg leave to investigate the foundation of his claim and to offer a few comments for your consideration, in the hope that they may lead to a correct understanding of the real merits of the engines under consideration.

There are many points in the report which

need to be considered in connection with various others in order to properly get at the real merits of the case. I wish, however, at the outset to disclaim any intention of casting any reflection upon the expert, as I believe he made an honest report from the data he had to work from, and while I may not agree with him as to the propriety of some of the grouping of data for comparison, I am quite willing to concede the honesty of his intentions in all particulars.

I believe it is fair to assume that no single test is absolutely reliable and shall make comparisons based on both tests, viz: condensing and non-condensing, and as Mr. Wheelock claims the award, propose to consider the basis of that claim. I am not aware that Mr. Harris has laid claim to the award, propose to make comparisons between the Wheelock and Reynolds engines only, except where it may be necessary to include the Harris to illustrate a point.

The engines were tested on two points on which users of steam are generally interested, viz: economy of fuel and regularity of motion under varying load. The average amount of coal per indicated horse power per hour for the two tests, consumed by the engines, was as follows:

Reynolds-Corliss .....	2.1711
Wheelock .....	2.2095

I must take exception to the experts comparison of regulation, as his comparison is based on the difference of average speed between the regular economy test and the average speed during regulation test, and this comparison is eminently unjust from the fact that the Wheelock regulator was adjusted after the economy trial was made, while the Reynolds went through all trials without any adjustment of any kind. During the regulator test with varying load the average speed for the three intervals of five minutes each, were as follows:

Reynolds with load on .....	75.360
" " off .....	75.576
<hr/>	
Difference .....	226
Wheelock with load on .....	75.266
" " off .....	77.466
<hr/>	
Difference .....	2.200

Or nearly ten times greater variation than the Reynolds.

It must be admitted that the figures of the report show the Wheelock to have been the lighter in weight as well as the lighter running engine. That the weight as given is incorrect, must be plainly evident to any engineer at all familiar with the proportions and construction of such engines, and a careful consideration of the conditions in connection with the figures is necessary to reach a reliable conclusion, as to the question of friction.

During the friction tests of the Reynolds engine the average power required to drive the line shaft and jack shaft was 9.0508 horse power and

During the trial of Harris' 7.9220 horse power

" " Wheelock 6.3184 "

As the tests were made in the order above given, the inevitable and only reasonable conclusion must be that the reduction in friction was due to the increased length of time the shafting had run, and I think it will be generally conceded that the engines would improve by running quite as rapidly as the shafting, not only in reduced friction, but largely in economy of fuel. The reduction in friction between the Reynolds test and the Wheelock is 2.2359 horse power. Now applying the same ratio of reduction to the engines, (and to this they are unquestionably entitled,) we find the friction of the

Reynolds .....	7.1282
Wheelock .....	7.9744

Corroborative of this point is the significant fact shown by the report that the average increase in friction of engines due to load was

Reynolds .....	5.5899
Wheelock .....	5.6512

It is worthy of note that the Reynolds had 5-inch steam pipe, 7-inch exhaust, (the regular size furnished to all purchasers,) while the Wheelock had 7-inch steam and 8-inch exhaust, both of which were extraordinary diameters and put on for the special purpose of this test.

The report gives the average steam pressure in steam pipe at the engines for the two trials at 90.252 for Reynolds and 91.472 for the Wheelock, and yet with the least compression in the Reynolds and smallest steam pipe the initial pressure of the Reynolds is 90.542, and of the Wheelock 88.292, showing the largest reduction of pressure in the Wheelock, notwithstanding the fact that the relative areas of steam pipes were, Reynolds 19.686, Wheelock 38.484, or nearly double that of the Reynolds. The average

pressure at point of cut off was for both trials, Reynolds 85.548, Wheelock 77.286, showing a reduction of pressure from the boilers to point of cut off in the

Reynolds .....	10.68
Wheelock .....	19.00

And the average counter pressure at mid stroke for both tests was:

Reynolds .....	3.697
Wheelock .....	2.836

All of which shows the valve mechanism of the Reynolds is by a large percentage most nearly perfect in its practical use of steam.

It appears that with the poorest vacuum the Wheelock engine made much the greatest gain by running condensing. The vacuum in the

Reynolds .....	25.45
Wheelock .....	23.98

and the percentage of gains over the non-condensing trials:

Reynolds .....	18.56
Wheelock .....	22.71

which the expert credits to the Bulkley condenser and not to the engine. It should be stated that the cost of raising the water for the Bulkley condenser was based on the economy of the engine, and not upon the economy of an ordinary steam pump which is used in the ordinary method of working, and which requires at least four times the steam for same work that was charged in this case.

In the last clause of the expert's report he says, "In view of the near approximation of the engines in steam economy, and the probability of error in the meter record of condensing water, (the quantities by meter not being fairly justified by the terminal temperatures and weights of steam delivered to the condensers, and temperatures of overflow from hot wells,) I am disposed to submit the accompanying report of the results of the trials without comment or award."

This virtually makes void and wipes out 4 out of 7 counts in which the Wheelock engine stands first, and in the 3 others it is again given first position owing to the smaller per cent of friction, and when this is corrected to correspond with reduced friction of shaft in proportion to time run, the Wheelock engine stands 3d and last in every count in which condensing water is not an element, and if any other evidence than the last clause of the expert's report is required to show that the Wheelock is not entitled

**Beardslee's Patent Improved Grain Cleaner.**

Milwaukee is known all over the world as a great center for the manufacture of flour and of flour milling machinery, and it is with pleasure that we are enabled to give our readers a description of Beardslee's Patent Improved Grain Cleaner which is manufactured by the well-known Cockle Separator Manufacturing Co., of Milwaukee, Wis.

The cleaning of wheat in such a manner that the most satisfactory results can be obtained in milling is desired by every miller. We gather from the most reliable authority, the following points in reference to the proper treatment of wheat for milling. It is universally understood that the cutting or reducing thin, the coating on the sides of the berry by the use of sharp or harsh surfaces to be very injurious, as it pulverizes more readily in making the several reductions, and consequently a greater amount of fine fluffy material to handle. Nine-tenths of the impurities on wheat are on the ends of the berry. The fuzz and smut particles on the one end is the greatest discoloring matter, the most difficult to extract when pulverized, and the most damaging to the flour. The other end of the kernel contains the germ, which is very objectionable, giving the flour a yellowish cast and rendering it of a sticky nature, and can be readily detected. To remove as much of this impurity before making the reductions, is the most practical and the most satisfactory way of reaching it. If allowed to remain on the wheat the results can be traced through the several reductions, reducing the value of the baker's grade and making a greater amount of a still lower grade. To clean the wheat properly aids very much in obviating these difficulties.

Fig. 1 represents a machine that is acknowledged by good authority to be one of the best devices offered the milling public to accomplish this work.

Fig. 2 shows a section of the inside of the machine, it being a light fluted angular rim chilled iron spider.

Its action on wheat, when in motion, is such that there is no dead or beating blow produced at any point on its surface, it striking the grain glancingly, reaching the ends very thoroughly, also offering a great amount of resisting surface, traveling over a space of two and one-half inches in circumference, throwing the grain to the case, and rapidly passing it through, thus obviating the carrying of a body of wheat, and only requiring a light power.

Fig. 3 represents the case surrounding the spiders.

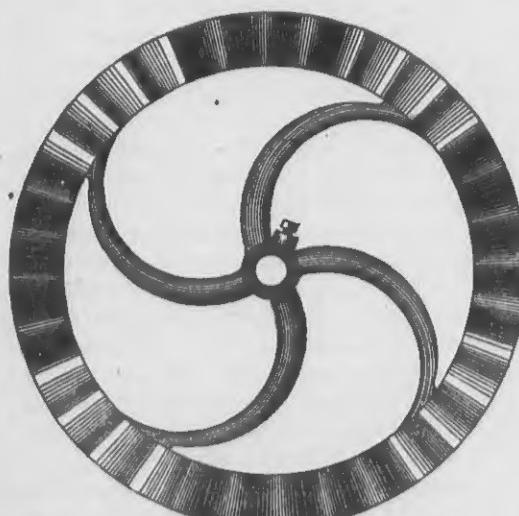


Fig. 2—Side View of Spider.

It is composed of bars of iron one-half inch in width, and one-eighth inch in thickness, grooved, hardened and polished (all the serrated or sharp edges being removed), and riveted very strongly and perfectly to iron bands, making a very durable case, and so constructed that it can be repaired easily, if by accident broken or damaged.

It will be seen that there is a very large case surface (one of the advantages), being able to clean the grain thoroughly, without resorting to severe usage or high speed.

The wheat, in passing through the machine, assumes a longitudinal position, traveling endways and spirally, the grooves offering a sufficient surface for the ends of the kernel to drop into, and causing them to turn over and over, producing a direct action on the ends of the berry, that cannot be reached in any other way.

The bars being square on their edges, and riveted to the circular bands, renders the inner edge of the space narrower than the outside, thus offering a ready escape for any particles that are forced into the space, obviating their filling up or clogging, and always admitting of

a free passage of air through the case to the fan above, removing all dust and impurities to the dust room.

The wheat, on leaving the case, is thrown in a receptacle provided with a valve, arranged in such a position that it spreads the grain in a thin sheet, thus leaving it in condition for an action of the air, which is regulated by a valve on the side, so that any desired separation can be made.

A machine of similar style is made for a finisher; the only change is in having the bars plain instead of grooved, and the spaces between them narrower, stronger blast air, placing a smooth hard finish on the wheat.

A number of these machines are at work in first-class mills.

Six sizes of machines are built, cleaning respectively from twenty to two hundred bushels per hour.

The best of material is used in their construction, and their finish is not equalled.

Parties desiring grain cleaning machinery will do well to try this machine.

**Explosions of Flour Dust.**

[A paper read before the St. Louis Engineers Club, April 18, 1881, by William Cordes.]

That fine dust, flour or other dry carbonaceous matter, when in suspension in air, will burn very rapidly has been known for some time. Such combustion is so rapid that when the air is confined an increase of pressure follows the increase of temperature and the effects are manifest as an explosion.

In 1872 a very serious explosion took place in a flour mill near Glasgow, Scotland, by which fourteen were killed and twelve wounded more or less severely. The inquest was attended by an investigation in which Mr. Stevenson MacAdam and Prof. W. J. M. Rankine were employed as experts, and they reported that this class of accidents was by no means uncommon, and could happen while there was no unusual work or risk of fire occurring.

The report recommends that flour mills be constructed with the dust rooms apart from the building, and of such light material that the damage by the explosion shall all be concentrated at this place and that renewal shall be easy and shall not be expensive.

In spite of this investigation and the eminence of the persons making such recommendation little heed was paid to the matter, at least in the United States, until in 1878 the calamity of Minneapolis, Minn., again directed attention to the fearful risk taken with a material which in the older processes was perfectly free from danger, but which by the very endeavor to improve became more nearly like gunpowder than anything else.

On February 28, 1881, an explosion took place in the Camp Spring Mill in St. Louis which seems to very strongly establish the wisdom of the Glasgow experts, and to place their conclusion beyond all question. This explosion took place at 8 P. M., and it has been thought worth while to place it upon record, especially as many of the facts are clearly known and established and are not involved in the usual mystery.

At the time there were on duty five men, whose stations were as follows: First, engineer, who also acts as fireman, on the ground floor at the northeast corner of the building; second, the miller who has general charge, and who goes all through the mill proper at least twice an hour; third, the oiler, who goes to all the faster journals to oil and inspect about once in two hours; fourth, the packer, who is stationed on the second or grinding floor and who handles and heads up the barrels; fifth, the barrel nailer, who acts as helper to the packer, and remains on the grinding floor.

At the time of the explosion all the men but the engineer were on the grinding floor, when one of the crushing rolls began to make an unusual noise; the miller started to throw off the belt driving this crusher, when the

middlings caught fire and the explosion followed instantaneously. The gas lights throughout the mill were extinguished. The dust room was situated at the northeast corner of the mill, over the engine room, and had no other connection with the mill than a 10-inch galvanized iron pipe, which connects with a Sturtevant suction fan, and by branches to the crushers. From the dust room to the fan is about 10 feet, and from the fan to the crusher about 85 feet. The branch is 25 feet of 4-inch tin pipe.

The dust room was 11x12x84 feet high, with four compartments, with hatchways 3 feet square in each of the three dividing floors. The dust conduit entered about 5 feet from the bottom floor, which was the roof of the engine room, and the air outlet was a ventilator at the top about 4x6 feet, with 8 feet height and lowered slats on all four sides. The lower floor was 7-8 inch, with joists 2x8 inch, 16-inch centers resting on the roof of the engine room. The sheathing of this roof was 7-8 inch, with joists 2x12 inches, spaced 16 inches. The south side of the dust room was the mill wall of brick, the lower 18 feet being 18 inches, the upper portion being 9 inches, excepting the upper 2 feet, which was wooden. The other three sides were alike. Upright studding 2x4x18 inch centers, carrying sheeting 7-8 inch, covered with light sheet iron. The west wall separated the dust room from a portion of the mill which had been added later and was used for bolting. The north and east sides were clear.

The explosion carried away the north and east sides entirely, some portions to a distance of 100 feet, but the greater part about 50 feet. The north side of the bolting room was moved out about 4 feet, and a piece 34 feet high and 22 feet long was left standing against the stack, which it nearly demolished; over the boiler room, just north of the engine room, the roof of the bolting rooms falling, as did the roof and ventilator of the dust room nearly vertically. The debris took fire and was soon extinguished without further damage.

An examination of the machinery revealed

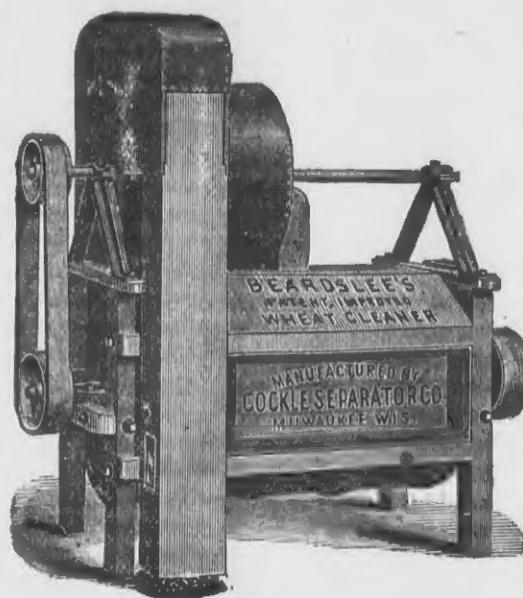


Fig. 1.

**Luminous Paints.**

According to the London *Building News*, luminous paint is getting into quite extensive use in England. Mention is made of offices coated with the paint, which give great satisfaction to the occupants. The effect is that of a subdued light, every object in the room being clearly visible, so that in a room so treated one could enter without a light, and find any desired article. The luminous paint is excited by the ordinary daylight, and its effect is said to continue for about thirteen hours, so that it is well adapted for painting bed-room ceilings, passages that are dark at night, and other places where lamps are objectionable or considered necessary. For staircases and passages a mere band of the paint will serve as a guide and costs but a trifle. For outdoor purposes the oil paint is used, but for ceilings and walls the luminous paint, mixed with water and special size, can be used the same as ordinary whitewash and presents a similar appearance in the daylight. By the recent discovery that it can be applied as ordinary whitewash considerably expands the field of its usefulness. Sheets of glass coated with the paint are in use in some of the vessels of the navy, at the Waltham Powder factory, at Young's paraffine works, and in the spirit vaults of several London docks; and now that, by increased production and the use of water as the medium, its cost is reduced by one-half, it will probably be extensively used for painting walls and ceilings. The ordinary form of oil paint has already been applied in many ways—to statues and busts, to toys, to clock faces, to name plates, and numbers on house doors, and notice boards, such as "mind the step," "to let," etc. The paint emits light without combustion, and therefore does not vitiate the atmosphere. Several experimental carriages are now running on different railways, the paint being used instead of lamps, which are necessary all day on account of the line passing through occasional tunnels.

**THE RECENT FLOUR EXPLOSION IN GERMANY.**

—The Millers' Association of Saxony, appointed Dr. H. Sellnick, of Leipsic, to visit the scene of the disaster, and to report to the Association upon its causes and effects. The report which is published in the German milling papers, shows that the explosion was a most serious one, and has many points of resemblance with the Glasgow explosion of 1871, and that of Minneapolis in 1878. The explosion took place in the flour dusting room, over which was a garret from which came the supply of flour for the mixing machine, and below on the ground floor, was the room in which the flour was made up in sacks. The room was boarded all around had no window, and

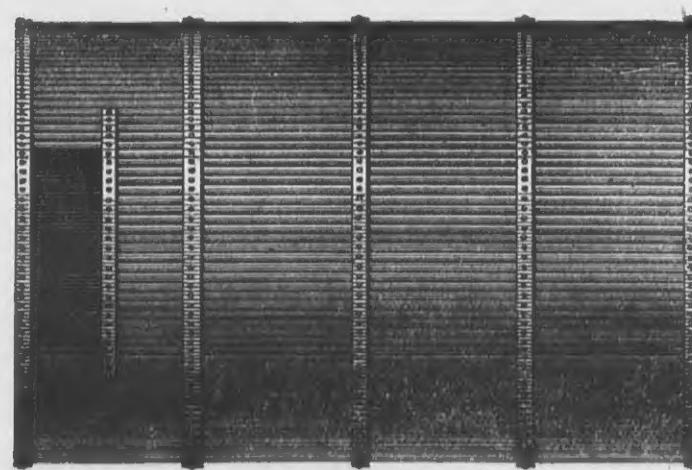


Fig. 3—View of Case.



Showing Grooves in Bars.

that the crusher from which the fire originated had broken the porcelain covering of one of the rolls, a piece falling between the rolls and causing the fire by friction and igniting the finely divided material, which was drawn by the fan and thrown into the dust room. The draft of the fan was so powerful that the material in the other branches did not ignite back to the other crushers, but the flame passed through the fan to the dust room, where the ignition produced the results described. The shock to the fan threw off the belt driving it, and put out the lights.

The reconstructed dust room is similar, but is made as light as possible in the hope that a similar explosion will be followed by no more serious consequences. The mill was stopped ten days, and the damage was \$1,600. Had the dust room been placed in the interior of the mill or had it been enclosed by brick walls, as it usually is, the destruction of the entire mill would have certainly followed, and another mysterious fire in a flour mill would have been added to the list by which St. Louis is already known to the insurance companies.

was lighted up by a gas light which was left burning night and day, but which was shut out of the room by a trap door, which was closed when the dusting machine was working, and which was only opened when the flour dust had settled. There can be no doubt that on the day of the explosion the machine commenced to work before this door was closed, and the flour flying straight into the flame caused the explosion. The building was fortunately lightly constructed, as Dr. Sellnick observes all dusting rooms should be, and the damage was therefore less than it otherwise might have been. The lesson drawn from the occurrence by the representation of the Millers' Association is that no open lights, should on any account, be permitted near a place when flour dust is flying about; it seems to be a fact which few millers have yet come to recognise, that flour is under certain circumstances as dangerous an explosive as gunpowder. Dr. Sellnick promises in a future paper to publish his views upon the best means to be adopted for the prevention of such accidents as that which he describes, and when this paper is published we shall probably refer again to the subject.—*Corn Trade Journal*. (London.)

(From The Miller, London.)

The London International Exhibition of  
Flour Mill Machinery.

May 10th, 11th, 12th, 13th and 14th.

A GLANCE AT SOME OF THE SYSTEM EXHIBITS.

On Saturday, the 26th ult., we had an opportunity of seeing the exhibit which Messrs. W. R. Dell & Son, Mark Lane, London, are preparing for the forthcoming display of flour mill machinery at the Agricultural Hall, Islington. In the extensive yard of the Reliance Works, West Croydon, belonging to the firm, the note of preparation for the great event has been heard for many weeks past, and although more than a month has still to elapse before the arrival of the opening day of the show, the exhibit is practically complete and ready for transportation to the arena in which for five days during next month it will form a chief feature in the most magnificent Milling Exhibition which has been witnessed in any part of the world. To people who live in the immediate vicinity of the Reliance Works, and to strangers passing along Factory-lane, the nature and destination of the exhibit, as it rose under the hands of the busy workmen, has been a matter of much speculation and some mystery. What was the erection which was rising so rapidly intended for? was the question which suggested itself, and to which none but the initiated could give an answer. It rises forty feet above the level of the yard, and is consequently a conspicuous object; it is thirty-seven feet from front to back, thirty-one feet wide, and the structure is as substantial as its dimensions are ample. It is, in point of fact, a complete new process mill, which could not merely be transported to the Agricultural Hall to give a practical illustration of a new milling system, but to the far Northwest of our American territories—where milling, when it exists at all, is in its infancy—to supply flour for the use of a still sparse and primitive population of a quality equal to that which can be commanded by the most advanced and civilised communities.

The forthcoming Exhibition will demonstrate one thing, if nothing else, and that is the enterprise of our leading milling engineers and mill furnishers. Those of them who are convinced that they have the means of enabling the millers of the United Kingdom to extricate themselves from the difficulties in which foreign competition has placed them, have evidently the courage of their convictions, and are prepared to spend large sums of money to bring such means before the notice of the trade in the most effective and attractive manner. The exhibit immediately under notice is only one of several which will be shown in May at the Agricultural Hall, Islington, which will illustrate the thoroughness their exhibitors have shown in their preparation and the expense they have incurred in bringing them before the public. Unfortunately, in some respects, the Milling Exhibition is sandwiched between two of another class, and can only remain open a few days. It will be seen, however, that those exhibitors who have systems to show have taken as much pains in their preparation as if they were to remain on exhibition for a month.

Descending from the general to the particular, the exhibit of the Messrs. Dell, structurally, is, as we have intimated, of the most substantial character. The foundations are of pitch pine, 12 by 6 inches. The floors, three in number, in addition to the basement, are of 3 inch deal, and the upright supports are composed of planks 9 inches by 3 inches, trussed and bolted, the sides of the exhibit being left open to give the spectators a complete view of the machinery.

Access to the different floors is provided by means of substantially built stairs with hand rails, and each floor is provided with railing on the sides as a protection to visitors. The composition of the mill—for, as has been already mentioned, the exhibit amounts to this—is as follows:—On the ground floor or basement are placed the driving means and the bottom of the elevators for the various products, which extend through the different floors to the top of the exhibit. On the first floor are three pairs of millstones 3 feet 6 inches diameter, fitted with bursting of the American type, the exhibit being intended to illustrate a mill on the New Process System, designed by Mr. George T. Smith. One pair of the stones will be used for breaking the wheat, the other two pairs being used for the reduction of middlings. Although three pairs of stones only are shown there is sufficient space on this floor for five pairs, the object of the exhibitors being to show a sufficient plant of machinery, and means for the treatment of the products of mills having a capacity of five pairs of

stones. The stive rooms are placed upon the stone floor. On the second floor are two George T. Smith Purifiers, one Barnard & Leas "Victor" Smutter, a centrifugal bran separator for the bran from the rolls, and the grinding bins for wheat. Flour can be taken from this or from the first floor. In the top or third floor are located Barnard & Leas' Oat and Weed Separator, the "Victor" Brush Machine of the same firm, one set of smooth chilled iron, one set of porcelain rolls, and one set of grooved chilled iron rolls for the bran. In this floor are two four reel bolt chests of the American (Richmond Manufacturing Co's.) pattern, manufactured by the Messrs. Dell & Son, for dressing flour, dusting middlings, and dressing ground middlings. The bolt chests are driven from vertical shafts, geared into a horizontal shaft extending along the top of the mill, on which also are fixed the pulleys in the elevators, so that no belts are required for driving. As the elevators reach from the ground floor, flour and other products can be spouted wherever they are wanted. The first motion for the mill is obtained from a horizontal shaft in the ground floor, driving the vertical shaft by a quarter twist belt. Gearing with the vertical are two horizontal shafts, one on the second floor driving the purifiers, roller mills, centrifugal silks, and oat and weed separator; and another on the top floor operating the elevators and flour bolts, as already mentioned. The brush machine and smutter are driven direct from the vertical shaft. The weight of the exhibit is about one hundred tons.

Another system which will be illustrated at the Exhibition is the Daverio, the exhibitor being Henry Simon, of Manchester. The exhibit will consist of a large collection of mill machinery on the ground floor, partly outside the gallery line, in motion, and partly underneath the gallery, not in motion. The section in motion will be shown upon a substantial timber erection consisting of two floors, enabling the practical working of the roller mill system to be fully exhibited. This portion will be divided into three sections; one will show Simon's complete roller milling system, with Daverio's patent roller mills, and Heinrich Seck's patent centrifugal flour dressing reels. This system will be shown by means of only three granulating rolls, so arranged as to perform six operations to elucidate as nearly as possible the results obtained with a much larger plant, and showing a type of a small plant suitable for taking the place of three pairs of stones in a country mill. In this portion the cleaning of bran by fine fluted rollers, and the crushing of wheat before being sent to the stones, will be shown separately, for the benefit of millers using stones and wishing to add these operations in their existing mills. At another section a new improved system of granulating, specially suitable for mills where space is a great consideration, will be exhibited. It will consist of a single compact machine, comprising within its limits the roller mills and dressing machinery necessary for reducing wheat completely on the highgrinding principle to flour, middlings and finished bran; the reduction, however, can be as gradual as may be desired. This machine is claimed to save three-fourths of the space and a large percentage of the power required by other systems for the same amount of work, and does away entirely with hoppers to the roller mills, intermediate feed rollers, and with most of the elevators and worms usually required. The chief advantage claimed is that the whole granulation of the wheat is performed on one floor, and can easily be superintended by one man. Thus a perfect feed high-grinding system may be applied in a mill with only two or three floors.

The third section of the exhibit will comprise improved machinery for purifying, and afterwards reducing and grinding the semolina and sharps produced by the before-mentioned granulating systems. It will also serve to show the grinding of sharps from stones in Daverio's patent roller mills, which are now very extensively used for that purpose, and in this section will also be exhibited at work detachers suitable for use with any roller mills working upon soft middlings. The whole of the dressing and middlings purifying in connection with the machinery will be performed by Heinrich Seck's patent centrifugal dressing machines, every style of which will be shown at work, doing every kind of work required in a flour mill, working on whatever system. There will be dressing machines all silk, others all wire; also Heinrich Seck's patent combined wire and silk machines, and his patent double machines (wire above and silk below), so arranged as to suit any mill

floor, even where the height is very limited. In the portion of the exhibit under the gallery, and not in motion, Daverio's patent roller mills of different makes, Heinrich Seck's patent centrifugals, as above described, patent middlings purifiers, patent detachers, new improved cockle separators, and other wheat cleaning machinery will be exhibited for the inspection of millers in such a way as to enable them to look more closely into the construction and details of these machines. The whole of the machinery in motion in Henry Simon's exhibit will be driven by improved shafting and hangers of the American type, as supplied by Mr. Simon with his machinery, when required, but all the pulleys will be made and specially lent for the exhibition by Hudswell, Clarke & Co., of Leeds, entirely of wrought iron, and mostly supplied with patent oilless carbonated bushes. There will also be exhibited on the stand a large wrought iron driving drum, by Hudswell, Clarke & Co., together with other samples of their wrought iron drums. The whole of the belts in use will be patent cotton belting of H. Simon's "Qualitas" make, as supplied by Thomas Aitken & Son, of Helmsshore.

Another system which will attract a large share of attention is the Nagel & Kaempf, shown by Sanderson & Gillespie, London, which will be fully illustrated by a mill that will consist of five floors, and occupy 1,170 square feet. The weight of this erection and the machinery which it will include will be about 150 tons, and it is intended to set the mill in motion during a certain number of hours on each day, and every facility will be given to millers to investigate the process of manufacturing flour by this system, in order to enable them to form their own opinion as to its merits.

J. Harrison Carter, London, will exhibit a gradual reduction system upon advanced lines, in which rollers, purifiers, centrifugals, and other forms of dressing reels will be used. Although no special structure, we believe, has been provided for containing the machinery, as in the systems we have just noticed, visitors will have an opportunity of fairly estimating the results yielded by it.

FIRST LIST OF EXHIBITS.

Joseph Barron, Leeds, will exhibit one combined middlings duster and purifier, with self-acting brush on top of sieves, which can be supplied with or without the duster, one chilled iron roller mill, and one centrifugal dressing machine, air tight at the ends and fed with a screw, and supported at each end in necks.

Joseph Bedford, Leeds, will exhibit one Green's patent vertical engine and boiler, one non-obstructive silk dressing machine, two centrifugal silk dressing machines, a porcelain roller mill, one chilled iron roller mill, one middlings purifier, and one mixing hopper, worms, elevators, etc.

W. R. Dell & Son, London, will exhibit two American bolt-chests (four reels), exhibited for the first time in this country; one 46 inch four sheet centrifugal silk machine; one 46-inch three sheet centrifugal silk machine, one

36-inch three sheet centrifugal silk machine, one 36-inch two sheet centrifugal silk machine, one 16-inch five sheet, new pattern, centrifugal silk machine, "Little Wonder," exhibited for the first time; one 12-inch five sheet, new pattern, centrifugal silk machine, "Little Wonder," exhibited for the first time; one 18-inch seven sheet, new pattern, centrifugal silk machine, "Little Wonder," exhibited for the first time; one 42-inch five sheet ordinary silk machine, one 12-inch five sheet offal divider, one 16-inch six sheet offal divider, one Chambers' patent "Reliance" scrubber and fan, one

No. 1 economic smutter and separator, one "Eclipse" smutter and separator, one unique smutter, two "Little Giants," two Dickey's patent drivers, exhibited for the first time in this country; one speed indicator, one G. T. Smith circular staff and prover, one economic wheat damper, four wheat mixers, one sacking valve, one millstone crane, top and bottom arcs for elevators, three sets, different patterns; one offal sifter, five Bean's dust balloons, exhibited for the first time; one Dell's patent dust collector, exhibited for the first time; Barnard & Leas' machines; one No. 3 Victor double brush; one No. 4 Victor double brush; one No. 1 Victor smutter, with shaker; one No. 3 Victor smutter, with shaker; one No. 5 Victor smutter, with shaker; one No. 2 Advance Brush and smutter, exhibited for the first time; one No. 3 Advance brush and smutter, exhibited for the first time; one No. 3 grader, with cockle attachment; one No. 6 grader, with cockle attachment; one No. 3 dustless oat and weed separator; one No. 5 dustless oat and weed separator; one No. 1 screeners

separator; one Eureka packer, exhibited for the first time; Geo. T. Smith's middlings purifiers; one No. 0 do; one No. 1 do; one No. 2 do; one No. 3 do; one No. 4 do; one No. 5 do; one No. 6 do; two No. 2 double purifiers, exhibited for the first time; Dell's patent Victor roller mill, porcelain roller mill, smooth chilled iron roller mill, fluted roller mill for bran, French burr millstones for wheat, middlings, barley, rice, cement, etc.; Cologne stones, peak stones, grind-stones, Benton's burr dressing machine, exhibited for the first time; Star wheat heater, exhibited for the first time; cockle separator, wheat sampling stick, Baker's cups and balls, water wheel governor, samples of worm conveyors for wheat and meal, Carbutt's sorrel cement for stopping holes in millstones, diamond silver steel mill bills, steel and wood bill thrifits, planed metal prover, mahogany proof staff.

John Fiechter & Sons, Liverpool, will exhibit their patent Helvetic purifier, single cylinder, bipartite and tripartite, and the patent continuous Helvetic centrifugal purifiers "in miniature." The same firm will also exhibit the "Fir" double pair chilled iron grooved roller mill, a single pair smooth roller mill, and the new detacher, Nos. 1, 2 and 3. Fiechter's patent No. 2 and No. 4 centrifugal, latest construction, and John Fiechter Langmesser's Swiss silk gauzes, the "Fir" brand, with sample covers and single sheets, made up.

R. G. Handley, of Birmingham, will exhibit a patent flexible mill stone driver, corn measures, tin flour scoops, samples of machine wire, mahogany millstone staff, a metal prover, malt shovels of various descriptions, sack trucks, mill chisels and mill chisel handles, flour machine brushes, mill brooms and hand brushes of various sorts, assortment of sieves for millers and maltsters, &c., patent needle lubricators, pully blocks, French and Swiss silks, and millers' spectacles.

J. H. Greenhill, Belfast, will exhibit one of his complete semi-portable corn mills, consisting of his patent disintegrator, corn screen, meal sieve, elevators, &c., in motion. Mr. Greenhill will also exhibit Bennett's patent compound purifier and separator, without exhaust or blast. A feature in this separator is a vertical screw conveyor, thus dispensing with elevator buckets.

Charles Hett, London and Brigg, will exhibit his 16-inch centre vent turbine.

Houghton & Co., Great Grimsby, will exhibit one No. 00 size centrifugal, clothed with wire of new design; one No. 5 size centrifugal, silk clothed, having four cylinders in one frame, new design; one No. 6 size centrifugal silk clothed, having one cylinder 120 inches long by 46 inches diameter, new design; one No. 3 size purifier, with traveling revolving brush upper side of silk, quite new; one No. 8 size Victoria smutter, with refuse collector, elevators, worm conveyors, &c. The machines will be at work, and, with the exception of the Victoria smutter, all are new, and will exhibit for the first time.

Munden, Armfield & Co., Ringwood, will exhibit Munden's combined separator; Munden's conical bran duster; improved separating bran duster; the improved centrifugal machine; an improved porcelain roller mill; an improved silk dressing mill; the Climax super silk mill, and a rapid safety sack hoist.

Penny & Co., Lincoln, will exhibit Penny's improved patent adjustable corn screen, class A, their wire flour dressing machine, sack lifters, and screens for malt, lime, gravel, &c.

Roger, Fils & Co., La Ferte-Sous-Jouarre, France, will exhibit burr blocks from their well-known and extensive quarries, a pair of 3 feet 6 inch millstones for wheat grinding, dressed by their diamond machine, and a pair of 4-feet millstones, suitable for cement, coprolite, bones, manure, paint, &c.

Seck Brothers, Bockenheim, Frankfort, will exhibit their wheat cleaner, first size, their self-adjusting exhaust, their centrifugal flour bolting machine, first size, a middlings purifier, and two rollers.

Oscar Scholz, London, will exhibit farina, dextrine, vermicelli and mustard.

Louis Simon, Nottingham, will exhibit one of his automatic and self-registering machines, No. 2, arranged for weighing 60 lbs., 1 bushel foreign wheat, or 45 lbs. or 80 lbs., as may be desired, with about 250 discharges or weighings per hour.

Spratt's patent biscuit manufacturers, London, will exhibit finest cabin and navy biscuits, forage biscuits, fish biscuits for feeding young fry and adult fish, flour of various qualities, oatmeal, best Scotch and Irish, greats, peas, rice, meal for poultry, meal for game, meal for pigs, and meal for cattle.

John Stanier & Co., Manchester, will exhibit one patent improved XL middlings duster; purifier and grader; one patent improved XL revolving conical cylinder for dusting middlings, cleaning and dividing bran and offal; one patent improved XL revolving conical cylinder, but cylinder stationary; sundry rolls; extra strong smut or screen wire of various meshes and widths, both in iron and steel; and malt kiln wire of other sorts, made any width up to seven feet, plain or galvanized. The firm will also show a collection of assorted articles.

Starkey, Sons & Co.'s (Corn Exchange, Mark Lane, London,) exhibit will consist principally of flour, corn and coal sacks, van and cart sheets of the ordinary kinds, and their improved transparent dressing, rick cloths, horse clothing, tyrs, etc.

J. W. Throop, London, will exhibit one Throop's combined smutter, aspirator and separator; one Richardson's wheat separator, new, and exhibited for the first time; one combined wheat separator and cockle machine (Richardson and Kurth's patent), new and exhibited for the first time; one Whitmore's middlings purifier; one Smith's patent electric middlings purifier, exhibited for the first time; two centrifugal silk flour dressing machines; one wheat heater; one bran separator (Gray's system), exhibited for the first time; five Gray's chilled iron corrugated rollers for different breakings in Gray's gradual reduction, in motion; one Gray's porcelain and chilled iron roller mill, in motion, exhibited for the first time; and one Gray's bran roller mill.

Van Gelder & Apsimon, Liverpool, will exhibit their complete system of grain separating and cleaning, having a capacity of 60 to 80 bushels per hour. The machines are as follows: The "Liver" double eccentric patent separator and grader, size 3 feet wide; one eight-inch cylinder separator complete, for separating oat, barley, cockle, harif, grass seed and rye from wheat. This machine is provided with Van Gelder & Apsimon's patent cleaning apparatus instead of revolving brushes; one improved "Van Gelder" patent smutter and polisher; one Kaiser's patent weighing machine; two sets of elevators working with Ewart's patent chains and Ley's malleable iron buckets; one patent exhaust fan; one set of conveyors, &c. The above series of machines will be in actual operation during the show. One "Liver" double eccentric patent separator and grader, size six feet wide, capacity 150 to 170 bushels per hour; one 12-cylinder separator complete, for separating oat, barley, cockle, harif, grass seed, and rye from wheat, capacity 150 to 170 bushels per hour; one large size improved "Van Gelder" patent smutter and polisher, capacity 100 to 120 bushels per hour; one patent exhaust fan, large size; one 2 cylinder machine (Mayer & Co.) designed by the exhibitors for separating oat, barley, cockle and harif from wheat, to meet the requirements of small millers; various sizes of Mayer & Co.'s cylinders for separating oat, barley, cockle, harif, grass seed and rye from wheat; also for taking out black round seeds and harif from oats and barley; magnets for taking wire, nails and iron out of grain; silks, various numbers, manufactured by Homberger Brothers, Swiss Wetzkon, Switzerland; Behrend's Rock cement, for repairing millstones and constructing rice hulling machinery, &c; various mill requisites, split pulleys, &c.

James Walworth & Co., Bradford, will exhibit one of Walworth's new improved patent Challenger aspirating middlings purifiers; one new improved purifier for small mills, for treating tailings or fine middlings; one new improved patent grain washing machine; one patent wheat rice, malt, and seed separator; one of their latest improved centrifugal silk flour dressing machines, with their new dis-integrator attached; also their patent system of fixing silk on, requiring no lacing or pasting; one of their excelsior centrifugal flour dressing machines; one improved bran and middlings duster and flour disintegrator, with iron revolving cylinder and outside revolving circular brushes; one new improved wheat cleaner; two lengths of iron worm conveyors, and one sample millstone prover.

Whitmore & Binion, London, will exhibit one three-pair burst for four-feet stones, on their patent belting driving principle; one six-reel silk bolting chest, on the American principle, of their own make; one purifier; one pair of French burn stones; one centrifugal flour dressing machine; one flour posser; one set of Downton's patent rolls; one double independent iron burst, with 8 feet 6 inches stones; one Murdoch's combined grain cleaner; one set of elevators; one Becker brush machine; millers' sundries and requisites. Their machinery in motion will be driven by a 20 horse-power Otto gas engine.

The Case Manufacturing Co., of Columbus, Ohio, report themselves full of orders for the Case purifier and their perfect feed box.

#### An American Roller Mill in Europe.

THE CLEAPSIDE ROLLER MILL IN GLASGOW, SCOTLAND.

[Written for the UNITED STATES MILLER by R. Birchois, M. E.]

Should an American start to make boots of gelatine and succeed in making money rapidly we may feel perfectly sure that within three years gelatine boot factories will flourish all over the States. For a long time Hungary and Switzerland produced the choicest flour and made a very nice "percentage;" but Germany,

in Germany the way they dress stones is to set them back up to the wall while one man holds the pick and the other armed with a sledge does the cracking! This statement may be an exaggeration but it conveys the idea that stone dressing in Germany is not usually well done. That England has generally poorly constructed mills seems a well established fact.

A few of the larger mills were built by foreigners—worthy German-Hungarian milling engineers, but even those mills do not seem to make much "show." The Hungari-

make plans for him. These were made with the usual care, showing every elevator and conveyor necessary, using the smallest possible amount of machinery. The accompanying illustrations represent the mill. A short explanation of them may help to understand them more readily. A wall divides the building into a smaller and a larger part. The former is designed for the wheat cleaning machinery and wheat storage, the latter for the mill proper. Thus the wheat dust is kept from getting into the mill proper. A storage elevator discharges into a receiving separator C, thence the wheat drops into the storage bins of 7,000 bushels.

This storage elevator and separator can be stopped and started easily as they are driven by V friction wheels.

A dirty wheat elevator takes the contents of the storage bins into a separator D, from where it passes consecutively into a cockle separator E, smutter F, brush G. Now it is elevated into a grader which makes two separations; the larger wheat enters on one set, the smaller on another set of corrugated rolls. All the cleaning machinery may be stopped and started very easily while the mill is running by a pair of internal, V friction wheels represented by S. The breaks or wheat reductions are elevated from their respective rolls to the short wire scalping reels, K. The tailing-off breaks are aspirated gently before going on the next roll, in order to remove the light bran particles and save them from being cut up.

The mill contains three 6-reel bolting chests, and one 3 reel chest with 16 feet reels, one scalping chest with five 6 feet reels, one centrifugal reel, one bran and one shorts duster, twelve Smith and two Gray purifiers, and three flour packers on which the flours are packed either in barrels or in sacks. The motor of the mill is a Reynolds-Corliss engine of 180 horsepower.

The engine shaft reaches into the mill house and drives a cross shaft by a pair of large bevel core wheels. This cross-shaft drives the roller line shafting by smaller bevel cores. The engine shaft itself drives a large pulley which drives the upper machinery by 26-inch leather belt. The shaft in fifth floor, carrying the contra-pully, drives the cleaners, reels and elevators partly direct, partly by an upright shaft. This shaft also gives motion by a 16-inch belt to a shaft running along wall, which again drives the purifiers, centrifugal reels, and the bran dusters.

The siftings of the scalping reels are sent to silk reels where they are separated into flour, dusty middlings and middlings. The dusty middlings pass down to a porcelain roll,

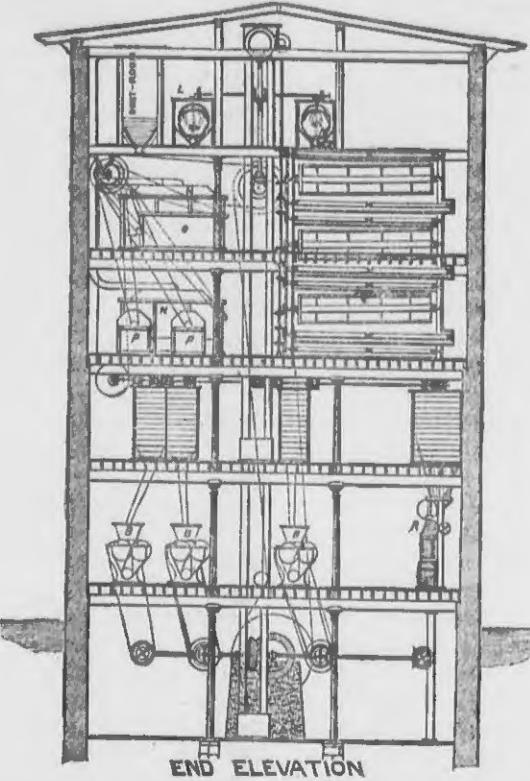
the middlings are sent to grading reels, L, on which the separation is made between fine and coarse middlings. The former are purified on American silk purifiers (G. T. Smith's patent), and the latter on purifiers built after the Hungarian type, (system Gray), each purifying 4 sizes of middlings, sizing being done on top of machine by sieve graders. The fine purified middlings are ground on porcelain rolls, together with some reduced fine middlings bolted out of the coarse crushed middlings. The coarse middlings are crushed on iron rolls. The flour made by this operation is spouted together with the flour obtained from the porcelain rolls grinding fine purified middlings. The flattened bran and bran particles obtained by the action of the iron rolls on coarse middlings are ground on low grade rolls (iron), together with other gray, soft middlings, and this meal is bolted on centrifugal reel O, producing a very salable low grade flour. The return middlings of good quality are also ground on porcelain rolls. The shorts and bran are brushed on dusters P before being finished.

The rolls are aspirated by a suction fan in basement, by which arrangement the grinding floor is made nearly dustless. This fan discharges together with the purifiers into a cloth dust room, the blow spouts entering between the double ceilings of this room forcing the air downwards and out through the meshes of the surrounding cloth, being put up in zig-zag fashion. Thus the filtered air stays in the mill and the filterings drop into a collecting conveyor from which they drop into an elevator for a reel, being freed of the flour, and thence they are dropped on a low grade roll for further reduction.

The mill is designed to produce 250 barrels of flour per 24 hours, and is of the all roller system, etc.

The millers A. & W. Glen, are intending to grind hard Minnesota spring wheat, and do not want to make more than four qualities of flour, viz.: First and Second Patent flour, Baker's flour, and Low Grade flour.

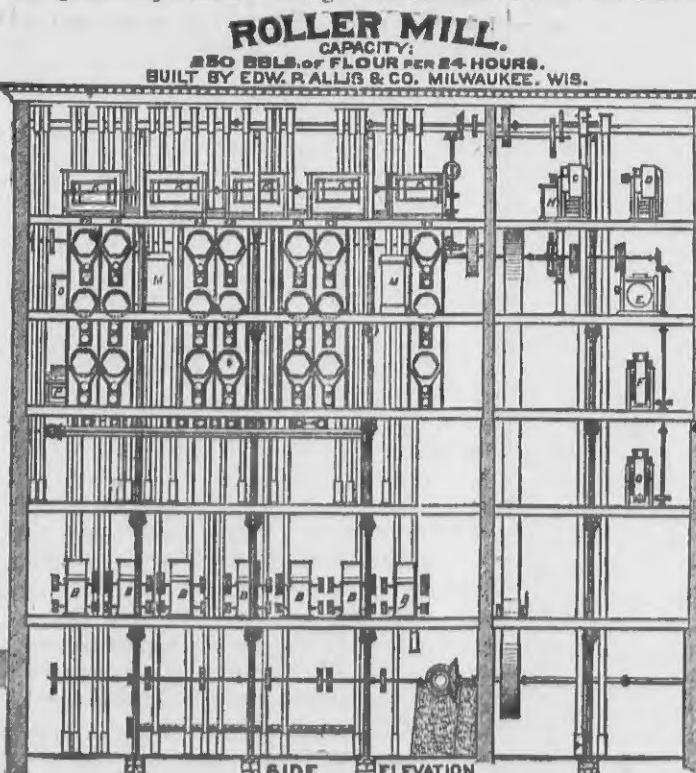
As your readers have noticed, their mill is built on the Complete-Roller System, which has proven to be the best mill system in this country, where the consumers want a good low grade flour; the poor low grade flour, obtained by stones, which cut up and turn into powder every impurity of the already poor stuff sent to them, is bound to be exported from here, as even the poorest mechanician of this country abhors to see baled products of this on his table.



France and England, countries of the same continent are to-day far behind Hungary in milling matters and are likely to remain so for years to come.

Was the choice flour of Pest not exported? Did the inhabitants of the adjacent countries not see the beautiful flours, numbers 0, 0 and 1 of Hungary? They did of course, but it seems that either the millers of the Magyar States kept their large yield of flour in proportion to quantity of wheat used, very secret, —danced a wild "czardas" amongst themselves to celebrate their joy at their success and increase of dividends or that the millers of the neighboring States were not shrewd, energetic or speculative enough—suffered the

men are noted for employing great numbers of men at very low wages. I have heard that a 1,200-barrel mill in Pest gave employment to 300 men. J. B. A. Kern, proprietor of the Eagle Mill of Milwaukee, employs about 60 men to run a mill of the same capacity. Americans like to build automatic mills—something that will almost run itself. When the wheat enters, every machine is properly set and goes on its course until the different qualities of flour drop into their respective hoppers. The American abhors sacks as used in foreign mills and only esteems the sack into which he puts that "confounded almighty dollar," which Europeans are pleased to term the only incentive for the Yankee's proverbial success.



lack of "go-ahead-ittiveness," as Americans would say expressing their quasi-indifference to improvements towards the Hungarian system of flour manufacture.

We being lamentably separated from Europe by the ocean, did not import Hungarian flour, and therefore must be excused for having known and learned but little about the course of transatlantic improvements in milling. After one or two mills tried the roller mill system and found it successful, we "pitched in" unanimously.

France still seems completely locked against the roller mill system. She has her native stones, keeps them well dressed and is stubborn enough to believe that she enjoys the same success as any other nation. I remember a man at the Paris Exhibition who dressed a stone, producing 60 cracks per inch and 40 to 50 per inch are commonly used. In this country we have paid great attention to the dressing of the stones, more than even the Hungarians do. It has been said here that

The English millers are aware of the small help necessary to attend to an American mill. They also know that we make an elegant flour, and become desirous to have us build their mills instead of the Hungarians, who require a regiment of mill-tenders. It is true that we do not put into the market as white a flour as their 00 and 0, of which they make very naturally only a small percentage (perhaps 12 to 15 per cent), but we can take out such flour also as soon as we see any money in it.

A little more than a year ago Mr. Glen, miller of Glasgow, Scotland, came to E. P. Allis & Co., Milwaukee, and surprised them by wishing this firm to send their famous mill engineer, Mr. W. D. Gray, to look over his mill and rebuild it on the American system. The firm promised to do so as soon as Mr. Gray could be spared. After waiting some time for him to come, Mr. Glen sent his son with the plans of the mill—(plans highly colored, but cheaply executed,) and ordered 21 of the Gray 9x18 noiseless rolls and the bolting chests, in order to induce Mr. Gray to

# THE UNITED STATES MILLER.

## Wisconsin Millers.

Pursuant to call the Wisconsin Millers met in annual convention at the Newhall House, Tuesday, April 12, 1881.

Present—E. Sanderson, President; S. H. Seamans, Secretary and Treasurer. Among members present were J. H. Kimberly, —Babcock, —Davis and John Stevens, Neenah; E. Schrantenbach, Okarchie; Otto Puhlman, Plymouth; Heald, of Sheboygan Falls. At 2:30 P. M. President Sanderson called the meeting to order, making a few appropriate remarks. The Secretary's report was as follows:

### Mr. President—

During the past year our increase of membership has been small and hardly kept pace with the number that have allowed their membership to lapse. We have added only two members, covering ten run of buhrs, these having paid the \$10 membership fee and \$45 per run, the same as paid by the original members. There has been collected from delinquents since last report eight runs on assessment No. 5, fifty-one runs on assessment No. 6. On the last assessment we have collected upon 340 runs, which shows the present strength of the association, and upon which I have paid the National Association their last call of \$5 per run.

On the 22d of November I made a draft on each delinquent for the amount of his dues. There were returned unpaid drafts amounting to or covering thirty-one runs. A few of these may yet conclude to pay.

At present there is very little doing in the way of litigation to arouse the fraternity to the necessity of organization. The Cochrane suits, appealed to the Supreme Court from St. Louis, are still undecided. The suit in the western district of New York is, by stipulation, to remain in "status quo" for the present. The Denchfield parties are apparently resting on their oars, the first suits having been appealed to the Supreme Court, and until a decision is reached there will probably be nothing further done by the complainants. In fact the various litigations that have been forced upon us have proven very unsatisfactory and very expensive to the plaintiffs, while the defense, by being widely distributed, has cost each individual but a trifling sum, and the results show that by combined effort only can we protect ourselves from the attacks of fraudulent patentees in the hands of unscrupulous parties, and that we will have but little to fear in the future if we keep our organization intact. Respectfully,

S. H. SEAMANS, Sec'y.

The Treasurer's report shows balance on hand at last meeting, \$639.54. Receipts, \$2,665. Expenses, \$301.08. Paid Millers' National Association, balance of assessment No. 4, \$811.35, assessment No. 5 on 390 run \$1,950. Balance on hand, \$701.66. On motion of Mr. Puhlman the reports of Secretary and Treasurer were accepted and adopted.

The Executive Committee to whom the President had referred the matter of capacity at which mills constructed upon different principles should be rated for membership, not being ready to report, they were by resolution, instructed to investigate and report upon the same at the next meeting of the National Association in case it held a meeting prior to the annual meeting of this association.

The Committee on Insurance not being present, this was also deferred to the next meeting.

The next business in order was the election of officers for the ensuing year.

On motion of Mr. Puhlman, a committee was appointed to nominate officers. The chair appointed Mr. Puhlman, Mr. Babcock and Mr. Davis. The committee nominated—

Edward Sanderson, Milwaukee, President; S. R. Willey, Appleton, First Vice President; C. Hodson, Janesville, Second Vice President; S. H. Seamans, Secretary and Treasurer.

Executive Committee—J. A. Kimberly, Neenah; W. S. Green, Milford.

Charles Manegold, Milwaukee, President *ex-officio*.

After a general discussion upon the crop prospects, the meeting adjourned.

## A Generous Milwaukee Miller.

John Kircher, who had been a sweeper in the Eagle Mills, owned by J. B. A. Kern was caught in the bolting gearing, while working, April 26th, and was so severely crushed that he died in a few hours. He left a family of wife and five children, the youngest of whom was about a year old. Mr. Kern has provided for the family by making the widow an allowance of \$25 per month until the youngest child becomes of age. This is a most generous act and is only one of the many noble acts of charity which Mr. Kern has performed without the slightest ostentation. No wonder his employes and friends speak of him as the man with a "heart as big as an ox."

**THE WHEAT MEAL PURIFIER.**—We are gratified to learn that the Wheat Meal Purifier is daily meeting with more and more success as

it becomes known. The machine has been thoroughly tested on the five "breaks" from one of the largest roller gradual reduction mills and this machine has successfully removed the coloring matter found to exist in each break and those who have tried it say that it is indispensable in connection with any system of reduction of wheat to flour. The gain in price received for the improved appearance of the flour soon repays all the cost.

## THE CANADIAN FLOUR AND WHEAT TARIFF.

The wheat tax must go, so must the flour tax, so must the coal tax, and a host of other burdens imposed as "compensations" for the wheat tax, which is itself one of the greatest prosperity-hinderers that this country is suffering from. As to the "grinding in bond," if the country millers have the least regard for their own prosperity they will bring to bear on the Government against the relaxation of the orders the whole of the influence they possess. If there is any change to be made in the regulations the alteration should be in the direction of greater strictness. A suggestion by one of the millers at Toronto was a good one. The Government ought to collect at the time of importation from the grinders in bond the amount of duty on imported wheat, and the duty ought only to be paid back on proof of the exportation of the wheat or the flour made from it. If the duty were collected instead of bonds being taken, there would be less danger of the transaction being "forgotten." The money would not, we presume, be stowed away in some convenient "M. I." pigeon-hole, as is apt to be the fate of papers the existence of which it is desirable to "forget." Paying the duty down would give the grinders in bond a living interest in jogging the recollection of the Government, a duty which, it seems, pertains to nobody at this juncture.—*Toronto Globe*.

**MILLS AND THE RAILROADS.**—This increase in milling, moreover, has a considerable effect on traffic, besides that caused by the reduction of the weight carried. To a great extent it fixes the course of shipments. The grain which before might go to the seaboard by any route whatever, now must go first to the mills and thence to the market. For instance, if there is a milling capacity of 10,000,000 bushels at Minneapolis more than formerly, these 10,000,000 bushels of wheat, or something like it, which formerly might have gone from the Red River valley directly east, by way of Duluth, or from Southern Minnesota on the Chicago & Northwestern directly east to Lake Michigan, now is almost sure to go to Minneapolis, and so can be carried further east only by the roads that reach Minneapolis, for, unless milling becomes very unprofitable, the mills are bound to have wheat to grind, and if necessary will divert it from its direct route to the East in order to get it. The railroads through the new wheat districts are generally eager to have mills established on their own lines, as they are sure to secure for their own road the carriage of the flour as well as that of the wheat, which they are not sure of when the grain is ground at a point where several roads compete for the carriage of the flour eastward, as at Minneapolis and St. Louis. However, they very commonly do secure the flour from the wheat their own lines carry to the mills at competing points, we believe, by making rates to the millers, which include both the carriage of grain to the mills and that of the flour from them.—*Railway Gazette*.

**THE MILLER'S DAUGHTER JILTED HIM.**—Information has just been received here of the horrible suicide of the son of a wealthy farmer in Roaring Creek township, Columbia county, ten miles from this place. Benjamin Bohme, aged 25 years, had been affianced for some time to Miss Rettie Long, the beautiful daughter of a Quaker miller, residing on the Roaring creek, near the village of New Media. The wedding was to have taken place this day, and every preparation had been made for the event. For some time the young man had evinced aberration of mind, and yesterday, when he called upon his affianced, he acted so strangely that she promptly requested the annulling of the engagement; saying that she could not marry him unless at the end of a year his manner had changed. Bohme informed his parents this morning at the breakfast table of the turn which affairs had taken, and said that he had no longer any desire to live. He was exceedingly morose, and brooded over his disappointment. About an hour afterward a pistol shot was heard in the direction of the barn, and elder Bohme, hastening thither, found his son lying upon the barn floor with the blood streaming down his cheek

and a wound near his temple. He lingered but a few moments, when he expired. He was the only son and heir to a large estate, while his affianced was an only daughter. A messenger from Catawissa announces that the young lady has been prostrated by grief by the death of her lover, and it is feared she will become insane.—*Danville special*.

## Importation of American Flour to South Germany.

(Translated from April number of the *Oester. Ueber, Mueller, for the UNITED STATES MILLER.*)

The importation of American wheat-flour has grown considerably during the recent months. There have been unloaded in the harbor of Mannheim alone more than 30,000 sacks within the last 90 days. This strong importation is remarkable when we remember that South Germany enjoyed a very good harvest in the past year, and that during the same time our mills had very favorable chances to run, owing to the short winter and the great and even quantity of water in our rivers. Some time ago our attention was called to the fact that the United States, whose milling industry was in a rather lethargic state, for quite a number of years, who took no notice apparently of the technical progress of Hungary, South Germany and Switzerland, had begun to make up for lost time and were now energetically changing their obsolete mill machinery to the most improved system. Many old mills have already been changed entirely. Meantime we have heard of colossal mills having been built, intended to work mainly for the export trade. The operative system in those mills is almost the same as the one in our Hungarian mills. Yet the United States have not stopped building new mills and improving their old ones. We imagine that this new era of mill improving has not yet reached its climax and we are justly entitled to entertain fears in regard to the trans-atlantic competition. The American flour of years ago was hard to sell in this country owing to its inferior quality and its inclination towards deterioration. The flour, they send us now is ground cool and dry and we cannot help being satisfied with it. There can be no doubt that the American flouring industry will create a still brisker competition to our Hungarian and South Germany millers than there is existing already. When the United States can make money by exporting their flour to Hungary in spite of the high duty of 2 marks (50 cents) per 200 pounds, in a year which was particularly favorable to our farmers, in a time when our mills could run most economically, we may expect that their flour export to Germany will take by far, greater dimensions in a year with a poor wheat crop. Again we see illustrated what the Americans can do in any line of business, if they find it a lucrative one. The American flour has taken foothold in the markets of West Switzerland as well as in South Germany. Our flour sellers will henceforth have to figure with the Americans.

## Funnygrafs.

A Kansas girl named Sleepy married recently a gentleman by the name of Tired. When the ceremony was over a thoughtless young lady sang "I'm Tired now and Sleepy too, come put me in——." But some one coughed very loudly, and there was an agonizing silence about four yards long.

Yea, remarked a musical critic, recently from Kansas, the fiddlin' was bully, but I tell you when that fat chap with the mustache laid hold of the fiddle and went for them low notes in the violin collar, I felt as if a buzz saw was a playin' Yankee Doodle.

"Don't you think my son resembles me?" enquired an apothecary, as he introduced his greasy-faced boy to the witty Dr. H.—"Yes," replied the doctor, pretending to scan the physiognomy of each; "yes I think I see your liniments in his countenance."

He was a fine-looking man, and he proudly strutted down the side walks, with an air of proprietorship in every movement. "Beg pardon," said a stranger, as stepped up to him, hat in hand, in utmost humility, "do I have your permission to remain in town over night?"

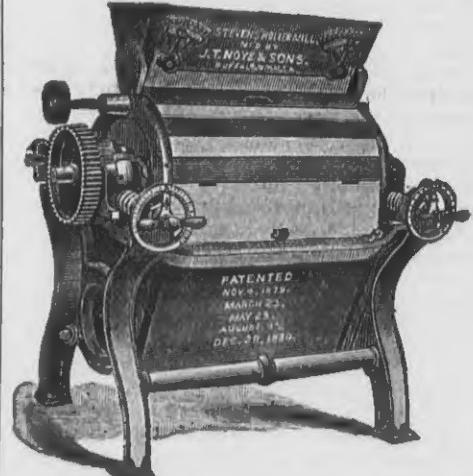
It is unlucky to fall out of a third story window on Monday. To meet a red headed woman on Tuesday—especially if you owe her anything. To break a forty dollar mirror on Wednesday. To dream you see red snakes or green monkeys on Thursday. To get drunk on Friday. To lose \$3.50 on Saturday. Or get locked up on Sunday. Paste this in your hat and don't you forget it.

## Do They Do It?

A correspondent calls our attention to the fact that railway companies are in the habit of using cars specially built for the transportation of grain to carry live stock, and pertinently remarks that "if wheat in good condition will absorb odors, how it is possible to prevent it from being tainted with the smell after being carried in cars that have held live stock a number of days?" We have not inquired very far into the facts set forth in this inquiry. If it is the custom of railway companies to use grain cars for such purpose, it is an abuse calling for remedy at once. We have in our possession a shipping-tag showing that a car built especially to carry grain, with patent doors, etc., has been used to transport horses. A gentleman who looked into this car reports that it was in an abominably filthy condition. It may be the railway company is decent enough not to use this car hereafter for the carrying of grain. And it may be it is not. Certainly cars put to the use of this one cannot be fumigated but that the scent of the "critter" will hang round it for months after. Wheat in bulk does absorb stench. It is one of the problems of grain shipment in vessels carrying all classes of merchandise how to avoid this. Millers in Europe who depend entirely upon imported grain are puzzled to find some effectual remedy to purify it from the foul odors it has absorbed while in transit.

Such being the effects, it is a matter for grain shippers and receivers to see that carrying companies do not practice this imposition. We present a single instance where the thing has been done. It may be an isolated case. We are free to confess we have little confidence in the decency of railway companies in a matter that seriously affect their dividends—and provisions for the accommodation of their patrons does that. In these busy times, when the rolling stock of every railway in the land is taxed to the utmost to meet the requirements of business, it is altogether likely they would prefer to use grain cars to transport cattle than spend money to build new ones.—*The Millstone, Indianapolis*.

## STEVENS' ROLLER MILLS.



There is no system of milling producing such good results as those effected by the Stevens Rolls.

They granulate without cutting, therefore making broader bran without rasping the impurities—consequently purer middlings, all of which are much easier to purify.

No cut bran and middlings adhering together as is the case in results produced by other than non-cutting rolls. They remove cookie shell without cutting—it passing off with the bran. They remove every germ without cutting or mashing.

The frame and adjustments as now made are the most simple and effective in the world.

The most inexperienced can set them absolutely correct, because the gauge and indicator tells their own story. This fact alone is of the greatest importance to the proprietor.

With it in his mill he is not so entirely dependent on the judgment of his miller who may be inexperienced, or possibly careless, which inefficiency or neglect may daily cost a great deal of money. Have now got the best bolt movement out, and can furnish either the bolt or gear machine.

Millers come and see for yourselves. Can take you through any number of mills that are free for your examination from cellar to garret.

I also keep on hand a full supply of staple mill furnishing goods. Bolting cloths made up in best manner on short notice. Plans and specifications furnished.

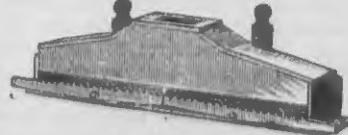
Address or call upon

**E. W. PRIDE, Neenah, Wis.**

Representing Jno. T. Noye & Sons, Buffalo.

Please mention this paper when you write us.

## The Perfect Feed Box.



It insures a perfectly even distribution of the middlings over the entire width of the cloth. Every miller will appreciate this. Fits all purifiers. Address

**CASE MANUFACTURING CO.,**

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Please mention this paper when you write us.

## FOR SALE CHEAP.

A four-run Custom and Merchant Flouring Mill; all in good repair. Good water power, 12½ feet head. This mill has a first-class reputation for doing all kinds of work. It is located in a good wheat growing section. This property positively must be sold. For further particulars call on or address

**HOLT BROTHERS,**

North Lake, Waukesha Co., Wis.

**Trade Marks.**

ACT OF MARCH 3, 1881, RELATING TO THE REGISTRATION OF TRADE MARKS AND REGULATIONS THEREUNDER.

The following is the text of the act for the registration and protection of trade marks which was passed by the Forty-Sixth Congress, and received the approval of the President March 3, 1881, together with the rules and forms adopted by the Patent Office for the information and guidance of persons seeking to register their trade marks:

*An Act to Authorize the Registration of Trade Marks and Protect the Same.*

Be it enacted by the Senate and House of Representatives of the United States in Congress assembled, That owners of trade marks used in commerce with foreign nations or with the Indian tribes, provided such owners shall be domiciled in the United States or located in any foreign country or tribes which, by treaty, convention or law, affords similar privileges to citizens of the United States, may obtain registration of such trade marks by complying with the following requirements:

First—By causing to be recorded in the Patent Office a statement specifying name, domicile, location and citizenship of the party applying; the class of merchandise and the particular description of goods comprised in such class to which the particular trade mark has been appropriated; a description of the trade mark itself, with fac-similes thereof, and a statement of the mode in which the same is applied and affixed to goods and the length of time during which the trade mark has been used.

Second—By paying into the Treasury of the United States the sum of twenty-five dollars, and complying with such regulations as may be prescribed by the Commissioner of Patents.

SEC. 2. That the application prescribed in the foregoing section must, in order to create any right whatever in favor of the party filing it, be accompanied by a written declaration verified by the person, or by a member of a firm, or by an officer of a corporation applying; to the effect that such party has at the time a right to the use of the trade mark sought to be registered, and that no other person, firm or corporation has a right to such use, either in the identical form or in any such near semblance thereto as might be calculated to deceive; that such trade mark is used in commerce with foreign nations or Indian tribes, as above indicated; and that the description and fac-similes presented for registry truly represent the trade mark sought to be registered.

SEC. 3. That the time of the receipt of any such application shall be noted and recorded. But no alleged trade mark shall be registered unless the same appear to be lawfully used as such by the applicant in foreign commerce or commerce with Indian tribes as above mentioned, or in within the provision of a treaty, convention or declaration with a foreign power; nor which is merely the name of the applicant; nor which is identical with a registered or known trade mark owned by another and appropriate to the same class of merchandise, or which so nearly resembles some other person's trade mark as to be likely to cause confusion or mistake in the mind of the public, or deceive purchasers. In an application for registration the Commissioner of Patents shall decide the presumptive lawfulness of claim to the alleged trade mark; and in any dispute between the applicant and a previous registrant, or between applicants, he shall follow, so far as the same may be applicable, the practice of courts of equity of the United States in analogous cases.

SEC. 4. That certificates of registry of trade marks shall be issued in the name of the United States of America, under the seal of the Department of the Interior, and shall be signed by the Commissioner of Patents, and a record thereof, together with printed copies of the specifications, shall be kept in books for that purpose. Copies of trade marks and of statements and declarations filed therewith and certificates of registry so signed and sealed shall be evidence in any suit in which such trade marks shall be brought in controversy.

SEC. 5. That a certificate of registry shall remain in force for thirty years from its date, except in cases where the trade mark is claimed for and applied to articles not manufactured in this country, and in which it receives protection under the laws of a foreign country for a shorter period, in which case it shall cease to have any force in this country by virtue of this act at the time such trade mark ceases to be exclusive property elsewhere. At any time during the six months prior to the expiration of the term of thirty years such registration may be renewed on the same terms and for a like period.

SEC. 6. That applicants for registration under this act shall be credited for any fee or part of a fee heretofore paid into the Treasury of the United States with intent to procure protection for the same trade.

SEC. 7. That registration of a trade mark shall be prima facie evidence of ownership. Any person who shall reproduce, counterfeit, copy or colorably imitate any trade mark registered under this act and affix the same to merchandise of substantially the same descriptive properties as those described in the registration shall be liable to an action on the case for damages for wrongful use of said trade mark at the suit of the owner thereof; and the party aggrieved shall also have his remedy according to the course of equity to enjoin the wrongful use of such trade mark used in foreign commerce or commerce with Indian tribes, as aforesaid, and to re-

cover compensation therefor in any court having jurisdiction over the person guilty of such wrongful act; and courts of the United States shall have original and appellate jurisdiction in such cases without regard to the amount in controversy.

SEC. 8. That no action or suit shall be maintained under the provision of this act in any case when the trade mark is used in any unlawful business or upon any article injurious in itself, or which mark has been used with the design of deceiving the public in the purchase of merchandise, or under any certificate of registry fraudulently obtained.

SEC. 9. That any person who shall procure the registry of a trade mark, or of himself as the owner of a trade mark, or an entry respecting a trade mark in the office of the Commissioner of Patents, by a false or fraudulent representation or declaration, orally or in writing, or by any fraudulent means, shall be liable to pay any damages sustained in consequence thereof to the injured party, to be recovered in an action on the case.

SEC. 10. That nothing in this act shall prevent, lessen, impeach or avoid any remedy at law or in equity which any party aggrieved by any wrongful use of any trade mark might have had if the provisions of this act had not been passed.

SEC. 11. That nothing in this act shall be construed as unfavorably affecting a claim to a trade mark after the term of registration shall have expired; nor to give cognizance to any court of the United States in an action or suit between citizens of the same State, unless the trade mark in controversy is used on goods intended to be transported to a foreign country, or in lawful intercourse with an Indian tribe.

SEC. 12. That the Commissioner of Patents is authorized to make rules and regulations and prescribe forms for the transfer of the right to use trade marks and for recording such transfers in his office.

SEC. 13. That citizens and residents of this country wishing the protection of trade marks in any foreign country the laws of which require registration here as a condition precedent to getting such protection there, may register their trade marks for that purpose as is above allowed to foreigners, and have certificate thereof from the Patent Office.

**Sandy's Experience With Mint-Juleps.**

Mr. John Greig, who, for the session commencing in 1841, represented the Canandaigua District in Congress (in place of Francis Granger, who resigned to accept the office of Postmaster-General), was a well-preserved Scotchman, as well in purse as in person, and very fond of entertaining in a princely manner. He had invited a small dinner party in order to entertain a Scotch friend who had recently arrived in America. The hour named had fully come and passed, but the honored guest had not. Mr. Greig became uneasy and nervous, for the servants had long since reported the courses ready for serving. He went out on the porch and looked down the avenue to see if he could get a sight of his friend, when, lo! there comes "Sandy," much as if he had hundred pounds or so upon his shoulders—in fact, he was a sheet or two in the wind, as it were. Greig took in the situation at once, and, hastening down the avenue, met the happy guest, and readily got him beneath his roof. Although "Sandy" was glorious, his mental powers were yet steady. He said: "John, I'll tell ye hoo it a' came aboot. While waiting at the hotel for the oor to come, I saw some Yankees at the bar a-drinkin' som'at I coodna tell what its name may be. It was a mixture of sugar and lemon and lumps of ice, and may be some else; but the bar-keeper shook the mixture between two tumblers until it foamed and sparkled like an aurora borealis; then he put in some sprigs resembling meadow-mint, and the Yankees quaffed the liquid through a sprig of rye straw, and they drank wi' a leer, a; if it was unco guid. I stepped to the bar-keeper and speered to ken the name o' the liquid, when he said it was a 'jollup,' or 'jewlip,' or something like to it in the soond. I telled him I'd tok yun; but, oh, mon, it was no bod to tok! The fak is, John, afoor I keened what I was about, I had made 'way wi' seeven, a' through a bit o' rye straw. Noo, John, if I had but kenned the power o' the thing, and had quot at six, my heid would no feel as if the pipers and the fiddlers were playing lively reels in it, and a score o' lads and lassies were dancing in glee a' aboot it. Noo, John, if ye be minded ever to try yon Yankee 'jollups,' tak may advice and be content wi' six at a sittin'. Mind ye, if ye try seeven, ye maun be waur nor Tam o' Shanter or mysel'; six is quite enough, John."—EDITOR'S DRAWER, in *Harper's Magazine* for May.

On a tombstone in the cemetery of Pagny-la-Voille may be read the following inscription:—"To the memory of Claudin Menu, wife of Stephen Etienne Renard, died January 28th, 1855, aged 44 years, regretted by her four children, Annie, Pierre, Francois, and Barbe, all dead before her."

**Messrs. Darblay's Mills.**

The famous mills of Messrs. Darblay at Corbeil (France) have been sold to a company, which will in future carry on the business under the style of "Societe Anonyme des Grands Moulins de Corbeil," with a capital of francs. 16,000,000 \$3,200,000. The mills have 138 pairs of stones, and are said to supply one-eighth of the total amount of flour consumed in Paris. The house was founded in 1760 by Mr. Simon Rodolphe Darblay, but it was under the management of his two sons that the firm attained its highest development. The transfer of the business to a limited company, owing to the death of the principal partners in the firm has created a lively sensation in the French milling trade, where the consequences will be watched with interest. The average profit for many years past has been ten per cent., and the promoters of the company anticipate a like return in the future.

In commenting on the probable results of the purchase of the mills by a financial society *L'Echo Agricole* observes "that every grain or flour trader in France knows perfectly well that the great house, whose mills have just been sold, owed its development to the high intelligence and commercial knowledge of its founders. The business increased gradually, for nothing was trusted to chance, and they always kept ahead of the times. They were further aided by their marvellous acquaintance with trade matters, and fortune justly rewarded their efforts. But should it therefore be concluded that the new concern will return the shareholders the same profit? We must be permitted to doubt it, and here are our reasons for doing so. The house Darblay owed its prosperity to the great commercial and industrial qualities of its old principals. Although a man may be a first-class financier, he may not know how to manage a mill. It is not sufficient to buy the wheat and put it between the stones, but in addition to the care of manufacturing, it is necessary to know when to buy the wheat and when to sell the flour. This is perhaps not so easy as is fancied on the Stock Exchange. Besides, the situation is not the same as in former years, for the milling industry in France and almost in all Europe is passing through a crisis which is causing serious concern to the trade. The Americans are exporting large quantities of excellent flour, and our country is gradually being shut out from foreign flour markets. From the above reasons, the new company will find itself in an inferior position in comparison to the conditions in which the old house prospered. We may add that the capital of £640,000 creates heavy charges at a moment when it is necessary to reduce expenses of all kinds, in order to meet the American competition. The interest alone on the capital, at 5 per cent., amounts to £32,000, and we ask ourselves how it can be met, in addition to the other general expenses, with an output not amounting to 1,000 sacks a day? We stated some time since that the profit on grinding does not on an average exceed one franc per sack of flour; but even if we take two francs (1s. 7d) profit as a basis for calculation and an output of 365,000 sacks yearly, we only get 730,000 francs (£29,200) profit. In short notwithstanding the fact of the success of the business in the hands of Messrs. Darblay, and the good management of the present company, we cannot refrain from expressing some doubts as to its success, because the circumstances and elements are no longer the same." The technical management of the mill will remain in the hands of Mr. Lainey, who has held the position for the last twenty years.—*The Miller, London.*

**AMERICAN AND FRENCH WHEAT.**—The necessity of extending the use of agricultural machinery in France is a subject occupying serious attention at this moment, for it is obvious that notwithstanding the utmost amount of protection which the Senate is likely to accord to the farming interests of the country, French agriculturists will continue to suffer from American competition. Owing to the small holdings in France, some difficulty undoubtedly presents itself against the introduction of machinery used elsewhere, but much may be done by co-operation or amalgamation. On the other hand, an extension of agricultural societies and other organizations, and a reduction of railway and canal tariffs, are questions of paramount importance. A commercial Congress, held at Lyons, has adopted resolutions urging the Government to take practical steps in the direction of these reforms, conclusive evidence of their necessity having been furnished in a most exhaustive report on the subject by M. Leon Chatteau, who

has made several journeys to the United States on behalf of the Government, with a view of promoting a Franco-American treaty of commerce. He has made an inquiry into the working of farms in the United States and France, and the comparative differences in the cost prices of wheat, French and foreign, in the French markets. As, however, Messrs. Clare Read and Albert Pell have fulfilled a similar mission for the information of the English Parliament, it is unnecessary to do more than point out his conclusions. He shows that 100 kilos. of American wheat, delivered at Havre, cost 17f. 60c., which he says is rather above than below the real figure, whereas at the very lowest computation, making allowance for sales of straw, French wheat enters the same market at a cost of 27f. The difference in favor of the American merchant is, therefore, 9f. 40c., or, taking into account the important duty of 60c., 8f. 80c. If the 100 kilos be sold at 29f. the French farmer has a profit of 2f. as compared with 10f. 80c., the benefit realized by his American rival. Any increase in the Customs tariff would, as he says, defeat the farmers altogether.—*Liverpool Journal of Commerce*.

**Another Monster Mill.**

We learn from the *Lumberman and Manufacturer*, of Minneapolis, that another monster mill, with a capacity nearly double that of the largest of the great mills now in operation there, has been projected, and is already a settled fact for the near future. This mill is to be erected by Messrs. Hill & Augus, of the Manitoba Railroad, and will have a grinding capacity of 8,000 barrels of flour per day. "The magnitude of the proposed mill," says our Minneapolis contemporary, "will appear by considering that the building will have to be as much as 250 feet square and six stories high, besides a storage elevator with room for half a million bushels of wheat. It will turn out 5½ barrels of flour per minute, 330 barrels per hour, 8,000 barrels per day, 2,400,000 barrels per year (300 days). It will require 10,000,000 bushels of wheat per year to supply it, and the value of its annual product will be at least \$14,000,000. It will make one-third of the present wheat crop of Minnesota into flour, and require an army of men to carry on the work growing out of its operations." We congratulate our Minneapolis friends on the prospect of this vast increase of their milling industry. It is worthy the enterprise and go-aheadativeness of this young giant of the North. We are glad to chronicle the announcement of such an enterprise, not only because we are proud of the growth and progress of the manufacturing industries of the great Northwest, but for the still better reason that we believe our entire surplus wheat crop ought to be exported in the shape of manufactured flour, instead of in its raw state, as the greater proportion of it now is. We hope the day is not far distant when not a bushel of wheat will be exported from this country. It is the life and vitality of the soil that is exported with the wheat, but which is saved and returned to it in the refuse product of the mill, turned into feed for stock. And this, to say nothing of the labor furnished to the army of workmen required to carry on the work growing out of the operations of the great mills required to turn the hundreds of millions of bushels of wheat into the manufactured flour.—*Western Manufacturer*.

**CEMENT.**—The following is an excellent cement: Take two to 4 parts clay, thoroughly pulverized and dried; add two parts of fine iron filings, free from oxide; one part of peroxide of manganese, one-half of common salt and one-half of borax. Mingle thoroughly; render as fine as possible; then reduce to thick paste with the necessary quantity of water, mixing thoroughly well. It must be used immediately. After application it should be exposed to warmth, increasing almost to a white heat. This cement is very hard, and presents complete resistance, alike to red heat and boiling water. For parts in this recipe use pounds or ounces, as the quantity desired may require.

**HARDENING SMALL TOOLS.**—It is said that the engravers and watch makers of Germany harden their tools in sealing wax. The tool is heated to whiteness and plunged into wax, withdrawn after an instant and plunged again, the process being repeated until the steel is cold to enter the wax. The steel is said to become, after this process, almost as hard as the diamond, and when touched with a little oil or turpentine, the tools are excellent for engraving, and also for piercing the hardest metals.

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## New Publications.

**HARPER'S MAGAZINE** for May contains the following interesting articles and illustrations: "I held Love's Head, while it did ake," by Robert Herrick; illustration by E. A. Abbey. "Music and Musicians in New York," by Frederick Nast; with fourteen portraits. "Aprille," a poem, by T. H. Robertson. "Athens," by Merrill Edwards Gates; with twelve illustrations. "Decorative Pottery of Cincinnati," by Aaron F. Perry; with twenty illustrations. "The Indian Girl," a poem, by Elizabeth Stuart Phelps; with an illustration from Scribner's painting. "Anne," a novel, by Constance Fenimore Woolson; with one illustration by Reinhart. "The Return Message," a story, by Edward Everett Hale. "The Market Bell," a poem, by Margaret E. Sangster. "Camp Lou," by Marc Cook; with eight illustrations. "The Unexpected Parting of the Beazley Twins," by R. M. Johnston; with two illustrations by Frost. "Thomas Carlyle," by M. D. Conway; with eight illustrations. "George Eliot," by C. Kegan Paul; with eight illustrations. "The Speaker's Ruling," by George Ticknor Curtis. "George Eliot," a poem, by Elizabeth Stuart Phelps. "Contrast," a poem, by Nora Perry. "Two," a poem, by Rose Terry Cooke. "A Laodecean," a novel, by Thomas Hardy; with one illustration by DuMaurier, engraved in London.

**GRIMSHAW ON SAWS.**—Published by Claxton, Remsen & Haeflinger, No. 604 Market street, Philadelphia, Pa. Price, \$2.50. The above work is not only interesting but truly valuable to all whose business requires the use of saws from the simple operator at the house wood-pile to the manager of the largest saw-mill. Saws of all kinds are described and illustrated and their use and abuse pointed out. We have learned more about saws in looking through its pages an hour than we ever knew before, and we believe if we studied up the work a short time we could ask and answer some questions that would puzzle sawyers "bred to the trade." The work is the first one of the kind published since 1846, and if it meets with the demand it deserves, the large edition issued will soon be exhausted. The author, Robert Grimshaw, Ph. D., is well known in this country as a technical writer.

**SCRIBNER'S MAGAZINE.**—Scribner & Co., New York, publishers. The illustrations of the May Scribner include some striking material. The frontispiece is a portrait of Thomas Carlyle, engraved by Cole after the photograph by the late Mrs. Cameron. Unlike most portraits of the Chelsea sage, this does not represent him in decrepitude. Technically it has been pronounced Mr. Cole's best piece of work. Another engraving of great excellence is a full-page portrait of Jenny Lind, from a beautiful daguerreotype taken in America in 1850, and never before engraved. Mr. Closson, the engraver of this block, is rapidly making advances in his art, and is regarded by many as a legitimate rival of Mr. Cole. Other portraits of popular interest are Mr. Blum's half-length of "Lieut. Schwatka in Esquimaux Dress," and Mr. Birch's "Artemus Ward as a Lecturer," based on an old sketch in the now defunct "London Illustrated Times," and vouches for by Browne's friends as the most faithful portrait. Among the other illustrations are drawings of "Sairy Gamp's," "Peggotty's" Boat-houses, "The White Horse Inn," "Fountain Court, the Temple, the alleged originals of "The Old Curiosity-Shop," and "The Little Wooden Midshipman," and other scenes from Dickens; four striking finished drawings by Blum of Roman subjects in the first century—the Augurs, the Vestal Virgins, the Flavian Arena, etc.; a map of the Schwatka sledge journeys and sketches of related incidents; finely engraved heads of merino ram and wild sheep of the Sierra, with other sketches; two large Cossack pictures, and a reliable map of the original topography of New York City, reconstructed from old data. Mr. W. D. Howell's new novella, "A Fearful Responsibility," will begin in the June Scribner.

**THE ILLUSTRATED SCIENTIFIC NEWS.**—The April number of this interesting and popular magazine is just out. Among the various subjects illustrated in this number is an engraving of the late Emperor of Russia's steam yacht Liviladja; a series of views illustrating wood working attachments for foot lathes; Prof. Secchi's solar photographic apparatus, with six distinct views of the sun taken by this instrument; engravings of the boats and apparatus used on Lake Geneva for determining the velocity of sound in water; a new machine for decorating enameled surfaces; engravings of several curious animals and objects in natural history, and an elaborate illustrated article on Bee Culture. Every number contains thirty two pages, full of engravings of novelties in science and the useful arts. Published by Munn & Co., 37 Park Row, New York, at \$1.50 a year, and sold by all news dealers.

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**TREVERES.**—Some time in February last, burglars entered the grist mill of F. Herchenbach, of Wausau, Wis., and carried away nine barrels of flour and about a ton of feed, and for a long time no trace of them could be found. Last week Mr. Herchenbach received a letter mailed from Lodi and signed "Stranger," informing him that two farmers

in the town of Wausau were the guilty parties.

A search warrant was issued and on Friday Under-Sheriff Monsen searched the premises of Fred Gaulke and found five sacks of flour concealed in a manure pile. Search was also made on the premises of Fred Fisher and four sacks of the flour was found under a large pile of straw in the barn. Both parties were taken into custody and acknowledged their guilt. They are now in jail awaiting examination.

The following parties are refitting their mills to the roller system and have ordered the renowned Gray Roller Mill with E. P. Allis & Co.'s patented sharp corrugations: Herzog & Roberts, Racine, Wis.; Rollston, Hall & Co., Marietta, Ohio; A. A. Taylor, London-ville, Ohio; H. C. Smith, Marcellus, N. Y.; Star & Crescent Mills, Chicago, Ill.; Edw. Schraudenbach & Co., Okauchee, Wis. Other late orders for the same rolls received by this concern are from, Winona Mill Co., Winona, Minn.; J. G. Sharp, Wilton Junction, Iowa; David Suppiger & Co., Highland, Ill.; C. N. Wilcox, Cannon Falls, Minn.; Barney & Kilby, Sandusky, Ohio; Williams Bros., Kent, Ohio; W. Seyk & Co., Keweenaw Wis.; C. C. Washburn, Minneapolis, Minn.; J. K. Mullen & Co., Denver, Colorado; Silbel & Co., Oskaloosa, Iowa; T. I. Cox, Bloomington Ill.; Clark & Smith, Centreville, Ind.; Forest Mills Co., Forest Mills, Minn.; Knoebel Bros., Belleville, Ill., for Marisa, Belleville & Highland, Ill.; F. Goodnow & Co., Salina, Kansas.

A Canadian company proposes to build ten first-class propellers to ply in the grain trade between Chicago and Montreal. The estimated cost of the fleet and equipment is put down at \$1,873,000: elevator, \$250,000; land and other expenses, \$100,000; reserve working capital, \$276,000; capital, \$2,500,000.

The following are the names of a few of the parties who have just bought the "Catlin" elevator bucket, W. E. Catlin & Co., Chicago, Ill.; Moseley & Motley, Rochester, N. Y.; Union Mills Co., Waterloo, Iowa; La Force & Smith, Floris, Iowa; J. P. Choal & Son, New Columbia, Ill.; Maxwell & Bro., Millersburg, O.; H. M. Cutchen, Winston, W. Va.; W. G. Gage & Co., Fulton, N. Y.; C. S. Annis, Atlanta, Ga.; Fleck, Bledung & Co., Guttenberg, Iowa.

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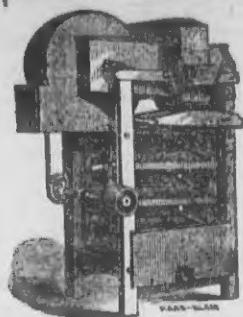
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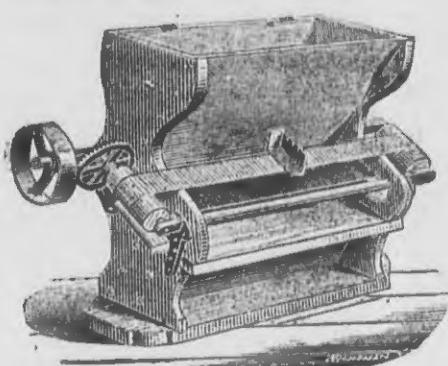
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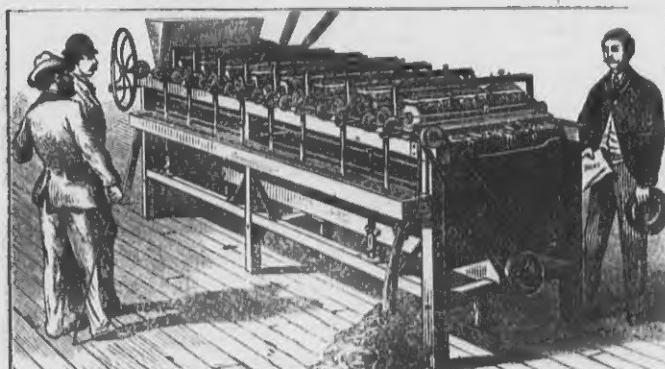
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New York Office, 17 MOORE ST.

This Company was organized in New Haven, on the 1st of March, 1881, with a capital of \$300,000, to manufacture and sell ELECTRIC MIDDLING PURIFIERS, having purchased the Smith-Osborne Patents granted by the United States, Great Britain, France, Belgium, Austria and Canada. The Company is now ready to execute orders. One of the Purifiers was put into the Atlantic Mills, of Brooklyn, soon after the first patent was issued on February 17, 1880, and has been in almost constant practical use since, demonstrating beyond a question that it possesses the following advantages:

It Purifies Middlings Absolutely Without Waste.

It Purifies Middlings with Greatly Reduced Power.

It Purifies Middlings with Greatly Reduced Space.

It Purifies Middlings with Greatly Increased Rapidity.

It Purifies Middlings from Spring and Winter Wheat Equally Well.

It Purifies Middlings with the Very Best Results.

It Dispenses with the Use of All Air Blasts.

It Dispenses with the Use of all Dust Houses.

It Dispenses with the Use of all Dust Collectors.

It Dispenses with the Use of Sieve Brushes and Cleaners.

It Dispenses with the Dangers of Explosions and Fires.

It Purifies all Dust House Material.

It Purifies the Finest Middlings.

It is Excellently Adapted to Manufacture Farina.

## IT IS REMARKABLY ADAPTED TO CUSTOM MILLS.

We start our enterprise with FOUR PURIFIERS in operation in the Atlantic Mills, Brooklyn, New York, and with several orders from different parts of the country. We are to have a Machine on Exhibition at the London International Exhibition to be held in May next, under the charge of Mr. J. W. Throop, of Loudon.

Samples of work will be sent upon application by mail, and all inquiries answered from the New York office. The machines in operation at the Atlantic Mills are open for inspection, and millers are invited to examine critically their workings and results.

In the month of April the General Manager will visit the PROMINENT MILLING POINTS OF THE WEST AND NORTHWEST, prepared to exhibit the NEW INVENTION and take orders.

Parties contemplating building new mills or reconstructing old ones, should see the superior working of the Electric System before making contracts for Purifiers elsewhere.

New York, March 14, 1881.

JOHN RICE, General Manager.

## THE UNITED STATES MILLER.

## FOR SALE.

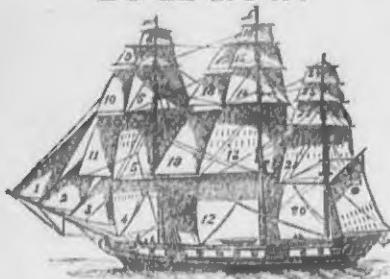
A Flouring Mill of the latest improved gradual reduction roller system, together with 80 acres of good land, good house and barn, located on the Iowa River, 8 miles northeast of Cresco, at Kendallville. The property must be sold, and a great bargain will be given. Death of my husband, S. S. Kendall, is the reason for offering the above property for sale. For further particulars address

MRS. S. S. KENDALL, Administratrix,  
Kendallville P. O., Winnesheik Co., Iowa.

## WEBSTER'S UNABRIDGED.

If you intend sometime to get a copy of Webster's Unabridged Dictionary,

"DO IT NOW."

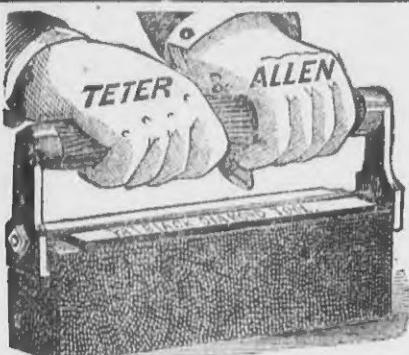


See Webster's Unabridged, page 1164, giving the name of each sail—showing the value of DEFINITIONS BY ILLUSTRATIONS.

The pictures in Webster under the 12 words, Beef, Boiler, Castle, Column, Eye, Horse, Moldings, Phrenology, Ravelin, Ships, (pages 1164 and 1219) Steam engine, Timbers, define 313 words and terms far better than they could be defined in words.

New Edition of WEBSTER, has 4600 NEW WORDS and Meanings, Biographical Dictionary of over 9700 Names.

Published by G. & C. MERRIAM, Springfield, Mass.  
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Over 4000 now in use. Guaranteed the best Tool in the market for smoothing the face and furrows, removing glaze, and restoring the burrs to their sharp, natural grit. It is far superior to Emery or Corundum. Used with or without water. Too large to send by mail. Price, \$8.50. Will send our Tool on trial against any other in the market. Miller's to pay for the best after a trial. Sold by Mill Furnishers throughout the world.

See that it has "Teter & Allen, Pat. Black Diamond Tool" on the plate.

TETER & ALLEN,  
404 Commerce St., Philadelphia, Pa.

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## STEEL CASTINGS

Mention this paper when you write us.

FROM 1-4 TO 10,000 LBS. WEIGHT.  
True to pattern, sound and solid, of unequalled strength, toughness and durability.  
An invaluable substitute for forgings or cast iron requiring three-fold strength.  
Gearing of all kinds, Shoes, Dies, Hammer-Heads, Cross-Heads for Locomotives, etc.  
15,000 Crank Shafts and 10,000 Gear Wheels of this steel now running prove its superiority over all other steel castings.  
CRANK SHAFTS, CROSS-HEADS AND GEARING specialties.  
Circulars and price lists free. Address

CHESTER STEEL CASTINGS CO.,  
Works, CHESTER, PA. 407 Library St., PHILADELPHIA.

## BOTTLED BEER.

## VOECHTING, SHAPE &amp; CO.

SOLE BOTTLES OF

Joseph Schlitz Brewing Company's Celebrated Milwaukee Lager Beer

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BOTTLERS' SUPPLIES CONSTANTLY ON HAND

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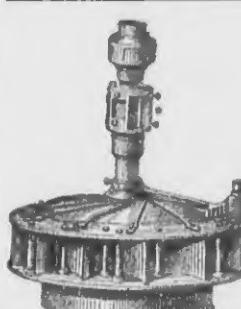


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James Leffel's Improved  
WATER WHEEL.

PRICES GREATLY REDUCED FOR 1879.



The "OLD RELIABLE" with improvements, making it the Most Perfect Turbine now in use, comprising the Largest and the Smallest Wheels, under both the Highest and Lowest Heads used in this country. Our New Book for 1879 sent free to those using Water Power. Address

JAMES LEFFEL & CO., Springfield, Ohio,  
and 109 Liberty Street, N. Y. City.

margin

[Mention this paper when you write us.]

Stout, Mills & Temple,  
DAYTON, OHIO,

MANUFACTURERS OF THE

## AMERICAN TURBINE WATER WHEEL,



## Best Quality French Burr Millstones.

Solo Agents in Dayton for the sale of

DH FOUR & CO.'S CELEBRATED BOLTING CLOTHS.

Flour and Paper Mill Machinery, Best Chilled or Porcelain Rolls for Crushing Wheat or middlings,

## AND GENERAL MILL FURNISHINGS.

The AMERICAN TURBINE, as recently improved, is unequalled in the power utilized from a given quantity of water, and is decidedly the BEST PART GATE Water Wheel ever known. It has also been otherwise greatly improved.

45 Large Illustrated Catalogue Sent Free on Application.



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[Mention this paper when you write us.]

## IMPORTANT NOTICE TO MILLERS.—The Richmond Mill Works and Richmond Mill Furnishing Works are wholly removed to Indianapolis, Ind., with all the former partners, tools, and machinery, and those of the firm who formerly built up and established the reputation of this house; therefore, to save delay or miscarriage, all letters intended for this concern should be addressed with care to Nordyke &amp; Marmon Co., Indianapolis, Ind.

[Mention this paper when you write us.]

## Mill Property For Sale.

Flour Mill, Saw Mill, Planer and Circular Saw Mills located on bank of Ohio River, 400 feet from depot of C. & P. R. R., 35 miles below Pittsburgh, Pa., in a good business location and grain growing neighborhood. Good shipping facilities by river and rail. Mills, engine and all machinery in good running order. Will be sold low for cash or exchange for farm. Also large commodious dwelling house. Address J. W. ENGLE, Industry, Beaver Co., Pa.

## For Sale—A Rare Bargain.

Desiring to turn my full attention to farming, I offer for sale my mill property. The Mill is 40x50 and 3 stories high. Power, 11 feet head. It has one set of wheat buhrs, and one of corn, all in good order, also a first-class cotton gin and 80 acres of land well improved, a good two story dwelling, cost \$700 to build. This property is situated on Elk River. I can grind 200 bushels at the lowest tide of water. I would sell for half cash, the balance on time. For further particulars come and see the property or address the undersigned.

J. FORESTER,  
Estell Springs, Franklin Co., Tenn.

SUBSCRIBE FOR THE  
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THE LEADING MILLING JOURNAL OF AMERICA.

Subscription Price One Dollar per year, post paid. Address UNITED STATES MILLER, 62 Grand Opera House, Milwaukee, Wis.

## JOHN C. HIGGINS,

Manufacturer and Dresser of

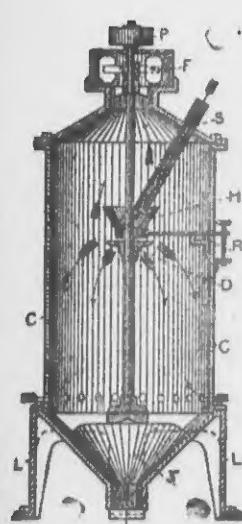
## Mill Picks,

No. 167 W. Kinzie Street,  
CHICAGO, ILLINOIS.

Picks will be sent on 30 or 60 days' trial to any responsible miller in the United States or Canada, and if not superior in every respect to any other pick made in this or any other country, there will be no charge, and I will pay all express charges to and from Chicago. All my picks are made of a special steel, which is manufactured expressly for me at Sheffield, England. My customers can thus be assured of a good article, and share with me the profits of direct importation. References furnished from every State and Territory in the United States and Canada. Send for Circular and Price List.

[Mention this paper when you write us.]

## NEW MILLING PROCESS.

DO NOT THROW ASIDE THE MILL-STONES UNTIL YOU HAVE  
INVESTIGATED THIS IMPORTANT INVENTION.

We have discovered and perfected a New Process by which, by the aid of our machine—light running, durable, requiring little power and space—we can successfully purify the meal of ground or crushed wheat, thereby bringing the straight flour, or first bolting (without waste) to the highest standard of excellence. By the use of our process and machinery we extract from the meal of ground or crushed wheat, all the low grades, the dead or overground flocculent material (which exists in all meal, however well prepared) before bolting, leaving nothing in the chop but the best quality of flour for the bolts to operate on and separate.

## THE ADVANTAGES obtained by these machines are as follows:

1. They thoroughly eliminate all low grades or coloring material before bolting, thus enhancing the value of the straight flour, both in strength and color.
  2. No clogging of cloths, freer bolting, and, consequently, more granular flour.
  3. Middlings purifiers greatly assisted, as a large percentage of specular and fine offal is deposited in fan-room by the machine.
  4. A better low grade flour, without consuming power by regrinding.
- Our process and machinery are fully covered by letters patent.

Will ship the Machine to any responsible party on thirty days' trial, and, if the results are not perfectly satisfactory, the same can be returned to us or held subject to our order.

## TESTIMONIALS.

The following testimonials speak for themselves. We have others, but think the following sufficient as they show that both spring and winter wheat regions will be greatly benefitted by the use of our machinery and process:

MINNEAPOLIS, Minn., March 15, 1881.—Wheat Meal Purifier Co., Minneapolis—Gentlemen: This is to certify that we have lately tested the merits of the Wheat Meal Purifier, and find the results so satisfactory that we have adopted them. Respectfully yours,

COLBURN & CHRISTIAN.

Eagle Mills.

—Wheat Meal Purifier Co., Georgetown, D. C.—Gentlemen: In reply to yours of February 2nd, I have the pleasure to inform you that your Wheat Meal Purifier has been in constant use in my mill for the past four months, and am now prepared to advise you that it gives entire satisfaction. By extracting the impurities from the chop before bolting it, we find the flour greatly enhanced in value and much more saleable at better prices. Yours truly,

D. G. WATKINS CO.

Old Dominion Mills, Alexandria, Va.

Wheat Meal Purifier Co., Georgetown, D. C.—Gentlemen: We are pleased to say that we have been using in our mill at this place two of your Wheat Meal Purifiers for the last eight months, and have fully realized all you represented to us in regard to them. They thoroughly remove all the light, fine impurities from the meal before going to the bolts, and the result is a vast improvement in our flour. Consequently, we would not think of running our mill a day without the Wheat Meal Purifier.

Respectfully yours,

NALIS & CO. Alexandria, Va.

ALEXANDRIA, Va., Jan. 3, 1880.—Wheat Meal Purifier Co., Georgetown, D. C.—Gentlemen: This certifies that I have been Inspector of Flour of this place for the past eight years, and having fully examined the operation and merits of your Wheat Meal Purifier I am prepared to add my endorsement of its very superior work. The difference in the flour when treated by your machine is fully fifty cents per barrel and more, according to percentage of light coloring matter extracted from the wheat chop before it goes to the bolts. The material taken out passes for a good article of super, and in my judgment has no business in the chop going to the fancy flour bolts. Very respectfully, JNO. W. TAYLOR,

Flour Inspector, Alexandria.

Wheat Meal Purifier Co., Georgetown, D. C.—To whom it may concern: This is to certify that I have carefully examined the operation of your Wheat Meal Purifiers in Nails & Co.'s mill, in Alexandria, Va., and am free to acknowledge their great utility. As Flour Inspector of Washington City, D. C., I can safely pronounce their flour worth fully fifty cents per barrel more than it was formerly. This improvement is the result of the chop being purified before it is bolted, and the material so extracted is a fair saleable "super" flour. I would recommend the use of the Wheat Meal Purifier to all millers desiring to raise the quality of their work.

B. F. CRABBS, Flour Inspector.

Washington City, D. C.

Address all communications to

## WHEAT MEAL PURIFIER CO.

Minneapolis, Minn., or Georgetown, D. C.

Please mention this paper when you write us.